responses (IgG) to P. insidiosum **antigens**. Therefore, the use of adjuvants associated with P. insidiosum **antigens** may increase the recovery rates obtained through immunotherapy.

L8 ANSWER 5 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:597131 BIOSIS
DN PREV200200597131
TI Development of a simplified latex agglutination test for the rapid diagnosis of infections caused by Pythium insidiosum.
AU Hutchens, M. (1); Mendoza, L. (1)
CS (1) Michigan State University, East Lansing, MI USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 214-215. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English
AB Pythium insidiosum is an emerging pathogen that causés life-threatening infections in humans and other animals. If the infections are not treated in their early stages of the infection, the disease is more difficult to treat with drugs or by immunotherapy. Several serological assays were developed and used during the past 10 years for its diagnosis. These included an immunodiffusion test, an enzyme linked-immunosorbent assay, fluorescent antibodies and a western blot. Although all these tests proved to be specific for **pythiosis** and successful in detecting antibodies or the **antigens** of P. insidiosum, the main problem has been that those tests had to be performed by qualified laboratories and professionals. Based on the fact that an early diagnosis would be advantageous for the rapid treatment of patients with life-threatening **pythiosis**, we developed a latex agglutination test to detect anti-P. insidiosum antibodies in those patients. This agglutination test proved to be very sensitive and discriminated well between sera from apparently healthy humans and sera from equines with **pythiosis**. Currently, the specificity of the test is under evaluation. The development of a P. insidiosum-latex agglutination test will allow clinicians to perform this test in their clinical settings, thus shorting the time between diagnosis and treatment. Specialized laboratories could later confirm their presumptive diagnoses.

L8 ANSWER 6 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:597110 BIOSIS
DN PREV200200597110
TI Immunotherapy, an approach to treat the infections caused by Pythium insidiosum.
AU Mendoza, L. (1)
CS (1) Michigan State University, East Lansing, MI USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 211. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English
AB Immunotherapy, using **antigens** from cultures of the human and animal pathogen Pythium insidiosum (PIV), showed that infected hosts with **pythiosis** reacted to injected immunogens by triggering an immune response that resulted in cure. Early observations on the therapeutic features of the PIV in equines with **pythiosis** indicated that the

eosinophilic reaction, observed during natural infection, was always substituted by a mononuclear reaction after successful treatment. Since them, we have used the vaccine in apprx500 horses, 11 dogs and 9 humans. In equines, the efficacy of the PIV was around 70%, in humans of 9 treated cases 8 were cured (88%) (all patients with arterial **pythiosis**), and in dogs of 11 treated cases only 5 responded (45%). These new data, on the curative properties of the vaccine, corroborated our previous findings on the specificity of the PIV and also supported our hypothesis that a shift of a T helper 2 response, during natural infection, to a T helper 1 reaction after vaccination may be responsible of the PIV's curative properties. These include the switch of the eosinophilic mediated cell response during infection to a mononuclear reaction after injection, a dramatic decline of IgE titers, and the rise and decline of key cytokine molecules. Similar therapeutic cancer vaccines are currently under investigation.

L8 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 3
AN 2002:230080 BIOSIS
DN PREV200200230080
TI Development and evaluation of an enzyme-linked immunosorbent assay for the serodiagnosis of **pythiosis** in dogs.
AU Grooters, Amy M. (1); Leise, Britta S.; Lopez, Mae K.; Gee, Melaney K.; O'Reilly, Kathy L.
CS (1) Veterinary Clinical Sciences, Louisiana State University, Baton Rouge, LA, 70803-8410: agrooters@vetmed.lsu.edu USA
SO Journal of Veterinary Internal Medicine, (March April, 2002) Vol. 16, No. 2, pp. 142-146. print.
ISSN: 0891-6640.
DT Article
LA English
AB **Pythiosis** (caused by the aquatic oomycete Pythium insidiosum) is a devastating and often fatal cause of either severe transmural gastroenteritis or locally invasive subcutaneous disease in dogs living in the southeastern United States. Although early diagnosis is essential for successful treatment, tools available for this task are limited. Therefore, we developed and evaluated an enzyme-linked linked immunosorbent assay (ELISA) for the detection of anti-P insidiosum antibodies in canine serum. A soluble mycelial extract of P insidiosum was utilized as **antigen** in the ELISA, which was used to evaluate serum from 43 dogs with **pythiosis**, 8 dogs with lagenidiosis (another canine oomycosis), 16 dogs with nonoomycotic fungal or algal infections, 22 dogs with nonfungal gastro-intestinal or skin disease, and 55 healthy dogs. Results were expressed as percent positivity (PP) relative to a strong positive control serum run on each plate. Medians and ranges for each of the 5 groups were as follows: **pythiosis** (81.7%, 50.6-98.5%), lagenidiosis (17.3%, 11.3-29.2%), other fungal or algal infections (8.2%, 4.7-15.4%), nonfungal gastrointestinal or skin disease (6.2%, 3.9-20.7%), and healthy dogs (6.7%, 3.0-15.2%). When using a cutoff value of 40% PP, the sensitivity and specificity of the ELISA both were 100%. In addition, ELISA values measured after successful surgical therapy therapy in 2 dogs showed a decrease of anti-P insidiosum antibody concentrations into the normal range as early as 2 months after treatment. We conclude that the ELISA is a sensitive and specific test for the diagnosis of canine **pythiosis**, and may be a useful tool for monitoring response to medical or surgical therapy.

L8 ANSWER 8 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:357291 BIOSIS
DN PREV200100357291
TI Production of polyclonal antibodies for the immuno-histochemical identification of Pythium insidiosum.
AU Grooters, A. M. (1); Lopez, M. K. (1); Brown, A. K. (1); Hodgin, E. C. (1)

9/998822

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E3	5	--> MENDOZA ALBERTO L/AU
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L3           21 (L1 OR L2)

=> s l3 and pythiosis
L4            9 L3 AND PYTHIOSIS

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L5            3 DUP REM L4 (6 DUPLICATES REMOVED)

=> d bib ab 1-3

L5   ANSWER 1 OF 3  WPIDS  COPYRIGHT 2003 THOMSON DERWENT on STN DUPLICATE 1
AN   2002-626529 [67]   WPIDS
CR   1999-526385 [44]; 2002-054339 [07]
DNC  C2002-176584
TI   Treating or preventing pythiosis in a mammal, comprises
     administering a vaccine containing intracellular cytoplasmic antigens from
     disrupted cells of Pythium insidiosum, and extracellular antigens secreted
     by P. insidiosum.
DC   B04 C06 D16
IN   MENDOZA, A L
PA   (UNMS) UNIV MICHIGAN STATE
CYC  1
PI   US 2002081308 A1 20020627 (200267)*      20p
ADT  US 2002081308 A1 Div ex US 1997-895940 19970717, CIP of US 1998-82232
     19980520, Provisional US 2000-245936P 20001103, US 2001-998822 20011101
PRAI US 2000-245936P  20001103; US 1997-895940   19970717; US 1998-82232
     19980520; US 2001-998822   20011101
AB   US2002081308 A UPAB: 20021018
     NOVELTY - A method of treatment for pythiosis or prophylaxis
     against pythiosis in a mammal, comprises administering to the
     patient a vaccine comprising intracellular cytoplasmic antigens separated
     from disrupted cells of Pythium insidiosum, and extracellular antigens
     secreted into a medium for growing cells of P. insidiosum in a sterile
     aqueous solution.
          DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
     following:
          (1) a method for providing an injectable vaccine for treating or
     preventing pythiosis;
          (a) growing the cells of P. insidiosum in a culture medium;
          (b) separating the cells from a first supernatant of the culture
     medium, which contains extracellular proteins;
          (c) killing the cells;
          (d) disrupting the cells in sterile distilled water;
          (e) separating the disrupted cells from the water to produce a second
     supernatant containing intracellular proteins;
          (f) mixing the first supernatant in (b) with the second supernatant
     in (e);
```

(g) separating the combined proteins from the mixture of (f);
(h) mixing the separated proteins in sterile distilled water; and
(i) dialyzing the mixture to remove low molecular weight components less than 10000 MW to produce the vaccine;
(2) a method of testing a response in a mammal to P. insidiosum vaccine by monitoring a Th1 and a Th2 response of the mammal, where the Th1 response increases and the Th2 decreases in mammals which are responding to the vaccine;
(3) a mammal model for testing a P. insidiosum vaccine comprising monitoring a Th1 and a Th2 response of the mammal to the vaccine, where the Th1 response increases and the Th2 decreases in mammals which are responding to the vaccine.
ACTIVITY - Fungicide.
MECHANISM OF ACTION - Vaccine.
A Thai boy diagnosed with **pythiosis** insidiosi in his external carotid artery was administered subcutaneously with 2 mg/ml P. insidiosum vaccine. Twenty hours after vaccination, a weal and flare reaction had developed at the injection site, and 48 hours post vaccination, wheal reaction attained its maximum size of 11 cm in diameter. No other side effects occurred except itching at the vaccination site. Fourteen days after the first dose, facial and tongue swelling had diminished. A second vaccination was given to the patient on the same day, and after 48 hours, a wheal reaction attained a diameter of 8 cm. After 2 weeks, patient's headache disappeared, facial and left tongue swelling were dramatically diminished, and the enlarged cervical lymph node had reduced in size. Patient was considered clinically cured 1 year after the first vaccination.
USE - The vaccine and the method are useful for treating or preventing **pythiosis** (claimed).
ADVANTAGE - Unlike previous vaccines, which can only cure early stage of **pythiosis**, the present vaccine, is able to cure patients who are in chronic stage of the disease.
Dwg.0/2

L5 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 2
AN 2001:521898 BIOSIS
DN PREV200100521898
TI Method and vaccine for treatment of **Pythiosis** insidiosi in humans and lower animals.
AU **Mendoza, Alberto L. (1)**
CS (1) Haslett, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University
PI US 6287573 September 11, 2001
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 11, 2001) Vol. 1250, No. 2, pp. No Pagination. e-file. ISSN: 0098-1133.
DT Patent
LA English
AB A method and vaccine for treatment of **pythiosis** in humans and animals is described. In particular a vaccine comprising a mixture of extracellular and intracellular proteins is described. The vaccine enables cures of chronic **pythiosis** in some patients.

L5 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 3
AN 1999:521514 BIOSIS
DN PREV199900521514
TI Method and vaccine for treatment of **pythiosis** insidiosi in humans and lower animals.
AU **Mendoza, Alberto L. (1)**
CS (1) Haslett, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University

TI Treating or preventing **pythiosis** in a mammal, comprises administering a vaccine containing intracellular cytoplasmic **antigens** from disrupted cells of Pythium insidiosum, and extracellular **antigens** secreted by P. insidiosum.

DC B04 C06 D16

IN MENDOZA, A L

PA (UNMS) UNIV MICHIGAN STATE

CYC 1

PI US 2002081308 A1 20020627 (200267)* 20p

ADT US 2002081308 A1 Div ex US 1997-895940 19970717, CIP of US 1998-82232 19980520, Provisional US 2000-245936P 20001103, US 2001-998822 20011101

PRAI US 2000-245936P 20001103; US 1997-895940 19970717; US 1998-82232 19980520; US 2001-998822 20011101

AB US2002081308 A UPAB: 20021018

NOVELTY - A method of treatment for **pythiosis** or prophylaxis against **pythiosis** in a mammal, comprises administering to the patient a vaccine comprising intracellular cytoplasmic **antigens** separated from disrupted cells of Pythium insidiosum, and extracellular **antigens** secreted into a medium for growing cells of P. insidiosum in a sterile aqueous solution.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method for providing an injectable vaccine for treating or preventing **pythiosis**;

(a) growing the cells of P. insidiosum in a culture medium;

(b) separating the cells from a first supernatant of the culture medium, which contains extracellular proteins;

(c) killing the cells;

(d) disrupting the cells in sterile distilled water;

(e) separating the disrupted cells from the water to produce a second supernatant containing intracellular proteins;

(f) mixing the first supernatant in (b) with the second supernatant in (e);

(g) separating the combined proteins from the mixture of (f);

(h) mixing the separated proteins in sterile distilled water; and

(i) dialyzing the mixture to remove low molecular weight components less than 10000 MW to produce the vaccine;

(2) a method of testing a response in a mammal to P. insidiosum vaccine by monitoring a Th1 and a Th2 response of the mammal, where the Th1 response increases and the Th2 decreases in mammals which are responding to the vaccine;

(3) a mammal model for testing a P. insidiosum vaccine comprising monitoring a Th1 and a Th2 response of the mammal to the vaccine, where the Th1 response increases and the Th2 decreases in mammals which are responding to the vaccine.

ACTIVITY - Fungicide.

MECHANISM OF ACTION - Vaccine.

A Thai boy diagnosed with **pythiosis** insidiosi in his external carotid artery was administered subcutaneously with 2 mg/ml P. insidiosum vaccine. Twenty hours after vaccination, a weal and flare reaction had developed at the injection site, and 48 hours post vaccination, wheal reaction attained its maximum size of 11 cm in diameter. No other side effects occurred except itching at the vaccination site. Fourteen days after the first dose, facial and tongue swelling had diminished. A second vaccination was given to the patient on the same day, and after 48 hours, a wheal reaction attained a diameter of 8 cm. After 2 weeks, patient's headache disappeared, facial and left tongue swelling were dramatically diminished, and the enlarged cervical lymph node had reduced in size. Patient was considered clinically cured 1 year after the first vaccination.

USE - The vaccine and the method are useful for treating or preventing **pythiosis** (claimed).

ADVANTAGE - Unlike previous vaccines, which can only cure early stage

CS (1) Louisiana State University, Baton Rouge, LA USA
SO Journal of Veterinary Internal Medicine, (May June, 2001) Vol. 15, No. 3, pp. 315. print.
Meeting Info.: 19th Annual American College of Veterinary Internal Medicine Forum Denver, CO, USA May 23-26, 2001
ISSN: 0891-6640.
DT Conference
LA English
SL English

L8 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:236635 CAPLUS
DN 130:265593
TI Penicilliosis marneffei and **pythiosis**. Emerging tropical diseases
AU Kaufman, Leo
CS Division Bacterial Mycotic Diseases, Centers Disease Control Prevention, National Center Infectious Diseases, Atlanta, GA, 30333, USA
SO Mycopathologia (1998), 143(1), 3-7
CODEN: MYCPAH; ISSN: 0301-486X
PB Kluwer Academic Publishers
DT Journal; General Review
LA English
AB A review is given with 28 refs. on penicilliosis marneffei and **pythiosis** insidiosi, emerging infections in subtropical, tropical, and temperate areas. Penicilliosis marneffei is endemic in several Southeast Asian countries and may be carried to other areas of the world by residents of these countries or visitors. **Pythiosis** occurs in humans and animals who frequent the aquatic habitats that harbor Pythium insidiosum. Although early diagnosis is important because of the high morbidity or mortality assocd. with these 2 diseases, the diagnosis of these infections can be difficult because their clin. and histol. features are not pathognomonic. Prompt diagnosis is a prerequisite to their appropriate treatment. Lab. testing, involving cultural, histol., and immunol. methods, is necessary to establish an unequivocal diagnosis. The clin. presentation, epidemiol., diagnosis and treatment of these diseases are discussed.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 4
AN 1998:34558 BIOSIS
DN PREV199800034558
TI Serodiagnosis of human and animal **pythiosis** using an enzyme-linked immunosorbent assay.
AU Mendoza, Leonel (1); Kaufman, Leo; Mandy, William; Glass, Robert
CS (1) Med. Technol. Program, Michigan State Univ., 322 N. Kedzie Lab., East Lansing, MI 48824-1031 USA
SO Clinical and Diagnostic Laboratory Immunology, (Nov., 1997) Vol. 4, No. 6, pp. 715-718.
ISSN: 1071-412X.
DT Article
LA English
AB Conventional serodiagnosis of Pythium insidiosum infections involves the use of the immunodiffusion (ID) test. This test specifically diagnoses human and animal **pythiosis**. The test, however, has limited sensitivity and does not detect some culturally proven cases of the disease. Because of the increased recognition of **pythiosis** among humans and animals, we developed and evaluated an enzyme-linked immunosorbent assay (ELISA) using a soluble **antigen** from broken hyphae of P. insidiosum. Studies were carried out with sera from five humans and eight animals with culturally and/or histologically proven

pythiosis. Some of these sera were negative in the ID test for **pythiosis**. Heterologous case sera from thirteen humans and two horses, plus 5 sera from healthy humans and 17 from healthy animals, were tested. Of the **pythiosis** case sera tested, the ID test detected only 8 of 13 (61.5%), whereas the ELISA detected all of them (100%). The ID and ELISA tests were entirely specific and gave negative results or low titers respectively, with sera from humans and animals with heterologous fungal infections or with no apparent illness. No correlation was found between the height of the ELISA titers and negative or positive sera in the ID test. Our results indicate that the ELISA is a reliable serodiagnostic test for **pythiosis**. It is as specific as the ID test but more sensitive.

L8 ANSWER 11 OF 26 CABA COPYRIGHT 2003 CABI on STN
AN 96:22897 CABA
DN 961200140
TI Merits and limitations of immunodiagnostic assays for systemic mycoses
AU Kaufman, L.
CS Division of Bacterial and Mycotic Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333, USA.
SO Czech Mycology, (1995) Vol. 48, No. 1, pp. 21-29. 19 ref.
ISSN: 0009-0476
DT Journal
LA English
SL Czech
AB New developments in immunodiagnostic tests for infections due to Aspergillus, Blastomyces dermatitidis, Candida, Cryptococcus neoformans, Histoplasma capsulatum, Pythium insidiosum, Paracoccidioides brasiliensis and agents of zygomycosis are discussed, including the use of more purified **antigens**, monoclonal or adsorbed polyclonal antibodies and the refinement or introduction of more sensitive assays. Limitations of these techniques such as cross-reactivity and failure to distinguish active from past infection and colonization from invasive disease are also considered.

L8 ANSWER 12 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 5
AN 1993:28524 BIOSIS
DN PREV199395016724
TI Immunoblot analysis of the humoral immune response to Pythium insidiosum in horses with **pythiosis**.
AU Mendoza, Leonel (1); Nicholson, Vivian; Prescott, John F.
CS (1) Dep. Microbiology, University Texas Austin, Austin, Tex. 78712-1095
SO Journal of Clinical Microbiology, (1992) Vol. 30, No. 11, pp. 2980-2983.
ISSN: 0095-1137.
DT Article
LA English
AB Reactions to Pythgium insidiosum by sera from horses with active **pythiosis** were investigated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) and immunoblotting. Five strains of P. insidiosum were grown in nutrient broth and then sonicated. After centrifugation, supernatant **antigens** were separated by SDS-PAGE. An exoantigen of Conidiobolus coronatus was also tested. Bands with molecular weights between 97,000 and 14,000 were identified by Coomassie blue and silver staining. After being transferred to nitrocellulose, the **antigens** were reacted against sera from six horses with **pythiosis**, sera from four horses cured a year earlier by vaccination, and sera from five healthy horses. The sera from horsses with **pythiosis** recognized at least 20 **antigens** in all strains. Three **antigens** with molecular weights of 32,000, 30,000, and 28,000 appeared to be immunodominant and specific. Sera from horses cured by immunotherapy showed only five very weak bands, three of them the 32,000-molecular-weight (32K), 30K, and 28K **antigens**.

No bands were observed with sera from healthy horses or sera from horses with a variety of other infections. Sera from horses with **pythiosis** cross-reacted with the 44K **antigen** of C. coronatus. The immunodominant **antigens** described here may be useful for diagnostic purposes and in immunotherapy for this oomycotic infection in horses.

L8 ANSWER 13 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:400987 BIOSIS
DN BR43:56862
TI **ANTIGENS** OF PYTHIUM-INSIDIOSUM RECOGNIZED IN SERA OF HORSES WITH ACTIVE **PYTHIOSIS**.
AU MENDOZA L; NICHOLSON V; PRESCOTT J
CS DEP. VET. MICROBIOL. IMMUNOL., UNIV. GUELPH, GUELPH, ONT. N1G 2W1, CANADA.
SO 92ND GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, NEW ORLEANS, LOUISIANA, USA, MAY 26-30, 1992. ABSTR GEN MEET AM SOC MICROBIOL. (1992) 92 (0), 515.
CODEN: AGMME8.
DT Conference
FS BR; OLD
LA English

L8 ANSWER 14 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 6
AN 1992:456154 BIOSIS
DN BA94:97554
TI IMMUNODIFFUSION TEST FOR DIAGNOSING BASIDIOBOLOMYCOSIS.
AU IMWIDTHAYA P; SRIMUANG S
CS DEP. MICROBIOL., SIRIRAJ HOSP., MAHIDOL UNIV., BANGKOK 10700, THAILAND.
SO MYCOPATHOLOGIA, (1992) 118 (3), 127-131.
CODEN: MYCPAH. ISSN: 0301-486X.
FS BA; OLD
LA English
AB An immunodiffusion test was developed for the diagnosis of basidiobolomycosis. When culture filtrate **antigen** (CFA) from basidiobolus ranarum was reacted against two human patients and twos rabbit antisera, 2 precipitin bands, inner (N) and outer (Y), were revealed for both patient and rabbit antisera. A line of identity was also observed between precipitin bands obtained with patient and rabbit sera. When CFA from B. ranarum (B CFA) was reacted against rabbit sera which contained antibody to Conidiobolus coronatus and Phythium insidiosum, 1 precipitin band corresponding to inner band (N) was observed. This finding showed that B. ranarum, C. coronatus and P. insidiosum shared at least one common **antigen**. After B CFA was absorbed with Phythium rabbit antiserum, the inner precipitin line that occurred between B CFA and rabbit antisera of Phythium and Conidiobolus disappeared. However, with Basidiobolus rabbit antiserum, the result did not change. The **antigens** which could be demonstrated by inner (N) and outer (Y) precipitin bands were heat stable at 56.degree.C for 30 min. The titer of the antibodies specific to these **antigens** decreased as the lesions subsided. When B. ranarum CFA was reacted against sera from 20 apparently normal persons, 20 diabetes mellitus patients, 5 aspergillosis patients, 2 candidosis patients and 3 **pythiosis** patients, no precipitin band was found. B. ranaraum CFA was also treated with each rabbit antiserum specific to Candida albicans, Malassezia furfur and Aspergillus fumigatus. No precipitin bands occurred with any of these antisera. Thus, this test was found to be practical, sensitive and specific, and cans be used to monitor patients infected with Basidiobolus ranarum.

L8 ANSWER 15 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 7
AN 1992:505874 BIOSIS

DN BA94:124399
TI EVALUATION OF TWO VACCINES FOR THE TREATMENT OF **PYTHIOSIS** INSIDIOSI IN HORSES.
AU MENDOZA L; VILLALOBOS J; CALLEJA C E; SOLIS A
CS DEP. MICROBIOL., UNIV. TEX. AUSTIN, AUSTIN, TEX. 78712-1095, USA.
SO MYCOPATHOLOGIA, (1992) 119 (2), 89-95.
CODEN: MYCPAH. ISSN: 0301-486X.
FS BA; OLD
LA English
AB Two vaccines to treat **pythiosis** insidiosi in horses were evaluated in 71 Costa Rican horses between 1982 to 1988. One vaccine used a cell-mass (CMV) as **antigen** and the other a soluble concentrated **antigen** (SCAV). Both vaccines cured horses infected with Pythium insidiosum (p value .apprx. 14%). The age of lesions prior to vaccination was important in the response of the horses to immunotherapy. All horses with lesions 0.5 months or less in duration were curred regardless of the vaccine used. Horses with lesions two or more months old did not respond to either vaccine. The age of the horses did not have any influence on their response to the vaccinations. The CMV produced a prominent inflammatory reaction at the side of injection, while the SCAV gave a low inflammatory reaction. In addition, the CMV lost its effectiveness two to three weeks after its preparation. By contrast, the SCAV maintained its ability to cure horses even after 18 months. Immunotherapy using SCAV can thus be used as the vaccine of choice in early cases of equine cutaneous **pythiosis** insidiosi.

L8 ANSWER 16 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 8
AN 1992:6133 BIOSIS
DN BA93:6133
TI IMMUNODIFFUSION TEST FOR DIAGNOSIS AND MONITORING OF HUMAN **PYTHIOSIS** INSIDIOSI.
AU PRACHARKTAM R; CHANGTRAKOOL P; SATHAPATAYAVONGS B; JAYANETRA P; AJELLO L
CS DEP. PATHOLOGY, FACULTY MEDICINE, RAMATHIBODI HOSPITAL, MAHIDOL UNIVERSITY, BANGKOK 10400, THAILAND.
SO J CLIN MICROBIOL, (1991) 29 (11), 2661-2662.
CODEN: JCMIDW. ISSN: 0095-1137.
FS BA; OLD
LA English
AB To facilitate the laboratory diagnosis of human cases of **pythiosis** insidiosi, an immunological test was evaluated. A soluble **antigen** was prepared from a human isolate of Pythium insidiosum, an aquatic, thermotolerant oomycete that causes infections in cattle, dogs, horses, and humans. Sera from seven proven cases of disseminated human **pythiosis** insidiosi were tested in an immunodiffusion test along with appropriate control sera from patients with a variety of actinomycotic, bacterial, and mycotic diseases as well as sera from uninfected individuals. Titers ranged from 1:1 to 1:32 in the seven serum samples from the disseminated cases of **pythiosis** insidiosi of varying severity. The heterologous sera gave negative reactions. The rapidity and specificity of the immunodiffusion test makes it a useful diagnostic tool for the serodiagnosis of P. insidiosum infections.

L8 ANSWER 17 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 9
AN 1990:415869 BIOSIS
DN BA90:76670
TI AIDS AND TROPICAL DISEASES MELIOIDOSIS **PYTHIOSIS** AND PENICILLIOSIS.
AU TANPHAICHITRA D
CS MAHIDOL UNIV., P.O. BOX 4-217, BANGKOK 10400 THAILAND.
SO ARCH AIDS RES, (1990) 4 (1-2), 77-92.
CODEN: AARSE9.

FS BA; OLD
LA English
AB Patients with defective T-cell functions are more susceptible to intracellular and related tropical infections. Pseudomonas pseudomallei (melioidosis agent) and Penicillium marneffei are two common intracellular infections in the tropics. This study deals with AIDS patients infected with recurdescent melioidosis and with penicilliosis. Since Ps. pseudomallei produces a characteristic **antigen**, we modified the GalE Salmonella typhi Ty21a oral vaccine strain, as to be protective against melioidosis, in a conjugal DNA transfer experiment. Patients treated with four doses of this bivalent vaccine strain developed antibody against Ps. pseudomallei up to 70%. Four thalassemic patients with or without hemoglobinopathy infected with Pythium insidiosum, an aquatic Phycomycetes, and one patient with corneal **pythiosis** are described. Cellular immunity testing in AIDS patients with recrudescent melioidosis, with penicilliosis and patients with **pythiosis** revealed abnormal values.

L8 ANSWER 18 OF 26 MEDLINE on STN DUPLICATE 10
AN 91191012 MEDLINE
DN 91191012 PubMed ID: 2488713
TI Canine **pythiosis**--isolation and identification of Pythium insidiosum.
AU Bentinck-Smith J; Padhye A A; Maslin W R; Hamilton C; McDonald R K; Woody B J
CS College of Veterinary Medicine, Drawer V, Mississippi State University, MS 39762.
SO JOURNAL OF VETERINARY DIAGNOSTIC INVESTIGATION, (1989 Oct) 1 (4) 295-8. Journal code: 9011490. ISSN: 1040-6387.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199105
ED Entered STN: 19910602
Last Updated on STN: 19910602
Entered Medline: 19910510
AB Pythium insidiosum was isolated from the subcutaneous tissue of a 1-year-old tan crossbreed dog and from the intestinal tract of an 18-month-old Samoyed male. Gomori's methenamine silver stain was superior to hematoxylin and eosin in demonstrating the organism in tissue sections. The agent was identified as P. insidiosum by zoospore formation in an aqueous yeast extract solution containing grass blades. Exoantigens produced in culture were shown to be identical to known P. insidiosum **antigens** by microimmunodiffusion.

L8 ANSWER 19 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 11
AN 1989:449342 BIOSIS
DN BA88:97614
TI IMMUNODIFFUSION TEST FOR DIAGNOSING HUMAN **PYTHIOSIS**.
AU IMWIDTHAYA P; SRIMUANG S
CS DEP. MICROBIOL., FAC. MED./SIRIRAJ HOSP., MAHIDOL UNIV., BANGKOK 10700, THAILAND.
SO MYCOPATHOLOGIA, (1989) 106 (2), 109-112. CODEN: MYCPAH. ISSN: 0301-486X.
FS BA; OLD
LA English
AB An immunodiffusion test was developed for diagnosing subcutaneous and systemic **pythiosis** in humans. When culture filtrate **antigen** (CFA) from Pythium insidiosum was reacted against patient and rabbit antisera, 1-5 preciptin bands occurred both in patient and rabbit antisera, and a lie of identity also occurred between patient

rabbit sera. When control P. insidiosum CFA was reacted with 30 apparently normal persons, 20 Thalassemia patients, 2 candidosis and 5 aspergillosis patients, no precipitin bands were found P. insidiosum CFA alos tested with rabbit antibodies to Blastomyces dermatitidis, Coccidioides immitis, Histoplasma capsulatum, Paracoccidioides brasiliensis, Candida albicans, Maslassezia furur and Aspergillus fumigatus revealed no cross reactions. This test is practical, sensitive and specific.

L8 ANSWER 20 OF 26 CABA COPYRIGHT 2003 CABI on STN
AN 91:116086 CABA
DN 911210132
TI Subcutaneous **pythiosis** in a dog
AU Howerth, E. W.; Brown, C. C.; Crowder, C.
CS Louisiana Veterinary Medical Diagnostic Laboratory, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA 70803, USA.
SO Journal of Veterinary Diagnostic Investigation, (1989) Vol. 1, No. 1, pp. 81-83. 7 ref.
ISSN: 1040-6387
DT Journal
LA English
AB A case of subcutaneous **pythiosis** is reported in a 2-yr-old female walker hound. The dog had a non-healing cutaneous lesions on the left lateral thorax which was unresponsive to antibiotics. An incisional biopsy was performed and Pythium **antigen** was demonstrated in sections of paraffin-embedded tissues by an indirect immunoperoxidase technique. During the following month, the lesion increased in size and complete surgical excision was attempted. At surgery, the lesion not only involved the subcutis but extended into the underlying musculature and axillary lymph node. The dog died 3 wks post-surgery.

L8 ANSWER 21 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 12
AN 1989:286852 BIOSIS
DN BA88:12196
TI **ANTIGENIC** RELATIONSHIP BETWEEN PYTHIUM-INSIDIOSUM DE COCK ET AL. 1987 AND ITS SYNONYM PYTHIUM-DESTRUENS SHIPTON 1987.
AU MENDOZA L; MARIN G
CS ONTARIO VET. COLL. MICROBIOL. IMMUNOL., UNIV. GUELPH, GUELPH, ONTARIO N1G 2W1, CANADA.
SO MYCOSES, (1989) 32 (2), 73-77.
CODEN: MYCSEU.
FS BA; OLD
LA English
AB **Antigens** and rabbit-antisera from holotypes of Pythium insidiosum and P. destruens were prepared to elucidate their **antigenic** relationship. The **antigens** and rabbit-antisera of P. insidiosum as well as P. destruens used as a reference system showed that both shared three precipitin bands in common. The **antigen** and rabbit-antisera of P. destruens and P. insidiosum used as a reference system against other strains isolated from humans and animals with **pythiosis**, also showed three precipitin bands in common. When we used sera taken from horses with proven **pythiosis** against **antigens** of P. insidiosum and P. destruens, six common bands were observed. We concluded that the etiologic agent of **pythiosis** is a single species P. insidiosum, and could be identified by serologic methods.

L8 ANSWER 22 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 13
AN 1989:137332 BIOSIS
DN BA87:71985
TI CRYPTOCOCCAL **ANTIGEN** SURVEY AMONG RACING PIGEON WORKERS AND PATIENTS WITH CRYPTOCOCCOSIS **PYTHIOSIS** HISTOPLASMOSIS AND

PENICILLIOSIS.
AU TANPHAICHITRA D; SAHAPHONGS S; SRIMUANG S
CS P.O. BOX 4-217, BANGKOK 10400, THAILAND.
SO INT J CLIN PHARMACOL RES, (1988) 8 (6), 433-440.
CODEN: CPHRDE. ISSN: 0251-1649.
FS BA; OLD
LA English
AB The cryptococcal **antigen** latex agglutination system (CALAS) test is simple, sensitive and specific. A total of 129 serum samples, 29 cerebrospinal fluids (CSF) and one ascitic fluid from 143 subjects were tested in the study. Cryptococcal **antigenaemia** was present in all CSF specimens tested from patients with culture-proven meningitis and cryptococcaemia, and in 91% of tested serum from the same group of patients with cryptococcal meningitis and cryptococcaemia. The occurrence of false-positive results among sera obtained from patients with phycomycosis (zygomycosis) due to Mucor spp., Conidiobolus coronata and Phythium spp., and from patients with Penicillium marneffei infections, was not observed. A random survey of 101 high risk subjects, who had fed pigeons for two months up to 40 years, for cryptococcal **antigenaemia** was also carried out and 4% were positive for cryptococcal **antigenaemia**. Of 14 Cryptococcus neoformans strains obtained from CSF cultures of patients with cryptococcal meningitis, and with cryptococcaemia, during 1977-1986, ten strains were serotype A and D, and four strains were serotype B and C.

L8 ANSWER 23 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 14
AN 1988:29444 BIOSIS
DN BA85:17169
TI **ANTIGENIC** RELATIONSHIP BETWEEN THE ANIMAL AND HUMAN PATHOGEN PYTHIUM-INSIDIOSUM AND NONPATHOGENIC PYTHIUM SPECIES.
AU MENDOZA L; KAUFMAN L; STANDARD P
CS DIV. MYCOTIC DISEASES, CENTER FOR INFECTIOUS DISEASES, CENTERS DISEASE CONTROL, ATLANTA, GEORGIA 30333.
SO J CLIN MICROBIOL, (1987) 25 (11), 2159-2162.
CODEN: JCMIDW. ISSN: 0095-1137.
FS BA; OLD
LA English
AB Identification of the newly named pathogenic oomycete Pythium insidiosum and its differentiation from other Pythium species by morphologic criteria alone can be difficult and time-consuming. **Antigenic** analysis by fluorescent-antibody and immunodiffusion precipitin techniques demonstrated that the P. insidiosum isolates that cause **pythiosis** in dogs, horses, and humans are identical and that they were distinguishable from other Pythium species by these means. The immunologic data agreed with the morphologic data. This indicated that the animal and human isolates belonged to a single species, P. insidiosum. Fluorescent-antibody and immunodiffusion reagents were developed for the specific identification of P. insidiosum.

L8 ANSWER 24 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 15
AN 1986:281147 BIOSIS
DN BA82:25010
TI IMMUNODIFFUSION TEST FOR DIAGNOSING AND MONITORING **PYTHIOSIS** IN HORSES.
AU MENDOZA L; KAUFMAN L; STANDARD P G
CS DIV. MYCOTIC DIS., CENT. INFECT. DIS., CENT. DIS. CONTROL., ATLANTA, GA. 30333, USA.
SO J CLIN MICROBIOL, (1986) 23 (5), 813-816.
CODEN: JCMIDW. ISSN: 0095-1137.
FS BA; OLD
LA English

AB A practical, sensitive, and specific immunodiffusion test was developed for diagnosing and monitoring **pythiosis** in horses. Culture filtrates, a soluble cell mass, and trypsinized Pythium sp. **antigens** were evaluated against prepared rabbit anti-Pythium sp. serum and **pythiosis** horse case sera. The culture filtrate **antigens** demonstrated the greatest capacity for detecting precipitins and the greatest stability during storage. In contrast, the trypsinized **antigens** had the weakest capability for detecting multiple precipitins and the poorest stability. The 13 sera from horses with proven active **pythiosis** were positive in immunodiffusion tests with the culture filtrate **antigens**. Each serum contained from three to six precipitins. Treated horses lost precipitins, and some became antibody negative. No false-positive reactions were noted in tests with sera from normal horses and humans or with sera from a variety of heterologous horse and human infections.

L8 ANSWER 25 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1986:253261 BIOSIS
DN BR31:7973
TI DEVELOPMENT OF A DIAGNOSTIC IMMUNODIFFUSION TEST FOR **PYTHIOSIS**.
AU MENDOZA L; KAUFMAN L; STANDARD P G
CS CENTERS DISEASE CONTROL, ATLANTA, GA. 30333.
SO 86TH ANNUAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, WASHINGTON, D.C., USA, MAR. 23-28, 1986. ABSTR ANNU MEET AM SOC MICROBIOL. (1986) 86 (0), 398.
CODEN: ASMACK. ISSN: 0094-8519.
DT Conference
FS BR; OLD
LA English

L8 ANSWER 26 OF 26 MEDLINE on STN
AN 85207193 MEDLINE
DN 85207193 PubMed ID: 3997656
TI Cutaneous **pythiosis** in beef calves.
AU Miller R I; Olcott B M; Archer M
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (1985 May 1) 186 (9) 984-6.
Journal code: 7503067. ISSN: 0003-1488.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198507
ED Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850712
AB Six Brahman and Brahman-cross calves less than or equal to 9 months old were examined because of ulcerative swellings of the fetlocks (5 calves) or numerous focal ulcerated cutaneous lesions (1 calf). Biopsies revealed focal cutaneous granulomas around regular, thick-walled branching hyphae, 4 to 9 micron in diameter. In all cases, portions of the hyphae were surrounded by granular encrustations, which ultrastructurally were composed of amorphous material comparable to **antigen**-antibody complexes. The protist Pythium sp was isolated from 2 calves.

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L1             14 S E2-E4
                E MENDOZA A L/AU
L2              7 S E3
L3             21 S L1-L2
L4              9 S L3 AND PYTHIOSIS
L5              3 DUP REM L4 (6 DUPLICATES REMOVED)
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revealed a moderate number of wide, bulbous, irregularly septate, branching hyphae. Results of an immunodiffusion test and an ELISA for anti-Pythium insidiosum antibodies were positive. Amputation was eliminated as a treatment option because lesions involved 2 limbs. Long-term systemic antifungal treatment was also rejected because of the cost, lack of therapeutic effect in many cases, and potential for adverse effects. The dog was treated with 2 doses of an anti-P insidiosum **vaccine** administered 2 weeks apart. One month later, the lesions were nearly completely healed, and values obtained via the immunodiffusion test and ELISA had decreased. Results of the immunodiffusion test and ELISA were negative 1 year later, and the dog had not had any recurrences.

L10 ANSWER 4 OF 18 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN DUPLICATE 4
AN 2002-626529 [67] WPIDS
CR 1999-526385 [44]; 2002-054339 [07]
DNC C2002-176584
TI Treating or preventing **pythiosis** in a mammal, comprises administering a **vaccine** containing intracellular cytoplasmic antigens from disrupted cells of Pythium insidiosum, and extracellular antigens secreted by P. insidiosum.
DC B04 C06 D16
IN MENDOZA, A L
PA (UNMS) UNIV MICHIGAN STATE
CYC 1
PI US 2002081308 A1 20020627 (200267)* 20p
ADT US 2002081308 A1 Div ex US 1997-895940 19970717, CIP of US 1998-82232 19980520, Provisional US 2000-245936P 20001103, US 2001-998822 20011101
PRAI US 2000-245936P 20001103; US 1997-895940 19970717; US 1998-82232 19980520; US 2001-998822 20011101
AB US2002081308 A UPAB: 20021018
NOVELTY - A method of treatment for **pythiosis** or prophylaxis against **pythiosis** in a mammal, comprises administering to the patient a **vaccine** comprising intracellular cytoplasmic antigens separated from disrupted cells of Pythium insidiosum, and extracellular antigens secreted into a medium for growing cells of P. insidiosum in a sterile aqueous solution.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method for providing an injectable **vaccine** for treating or preventing **pythiosis**;

(a) growing the cells of P. insidiosum in a culture medium;

(b) separating the cells from a first supernatant of the culture medium, which contains extracellular proteins;

(c) killing the cells;

(d) disrupting the cells in sterile distilled water;

(e) separating the disrupted cells from the water to produce a second supernatant containing intracellular proteins;

(f) mixing the first supernatant in (b) with the second supernatant in (e);

(g) separating the combined proteins from the mixture of (f);

(h) mixing the separated proteins in sterile distilled water; and

(i) dialyzing the mixture to remove low molecular weight components less than 10000 MW to produce the **vaccine**;

(2) a method of testing a response in a mammal to P. insidiosum **vaccine** by monitoring a Th1 and a Th2 response of the mammal, where the Th1 response increases and the Th2 decreases in mammals which are responding to the **vaccine**;

(3) a mammal model for testing a P. insidiosum **vaccine** comprising monitoring a Th1 and a Th2 response of the mammal to the **vaccine**, where the Th1 response increases and the Th2 decreases in mammals which are responding to the **vaccine**.

ACTIVITY - Fungicide.

MECHANISM OF ACTION - **Vaccine**.

A Thai boy diagnosed with **pythiosis** insidiosi in his external carotid artery was administered subcutaneously with 2 mg/ml P. insidiosum **vaccine**. Twenty hours after **vaccination**, a weal and flare reaction had developed at the injection site, and 48 hours post **vaccination**, wheal reaction attained its maximum size of 11 cm in diameter. No other side effects occurred except itching at the **vaccination** site. Fourteen days after the first dose, facial and tongue swelling had diminished. A second **vaccination** was given to the patient on the same day, and after 48 hours, a wheal reaction attained a diameter of 8 cm. After 2 weeks, patient's headache disappeared, facial and left tongue swelling were dramatically diminished, and the enlarged cervical lymph node had reduced in size. Patient was considered clinically cured 1 year after the first **vaccination**.

USE - The **vaccine** and the method are useful for treating or preventing **pythiosis** (claimed).

ADVANTAGE - Unlike previous **vaccines**, which can only cure early stage of **pythiosis**, the present **vaccine**, is able to cure patients who are in chronic stage of the disease.

Dwg.0/2

L10 ANSWER 5 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:262085 BIOSIS
DN PREV200300262085
TI Immunotherapy for fungal infections.
AU Casadevall, Arturo (1)
CS (1) Department of Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, NY, USA USA
SO Jacobson, Jeffrey M. [Editor]. (2002) pp. 303-322. Infectious Disease. Immunotherapy for infectious diseases. print.
Publisher: Humana Press Inc. 999 Riverview Drive, Suite 208, Totowa, NJ, 07512, USA.
ISBN: 0-89603-669-3 (cloth).
DT Book
LA English

L10 ANSWER 6 OF 18 CABA COPYRIGHT 2003 CABI on STN
AN 2003:7682 CABA
DN 20023170468
TI Serological response in rabbits immunized with Pythium insidiosum antigens associated with different adjuvants
Resposta sorologica de coelhos imunizados com antigenos de Pythium insidiosum associados a diferentes adjuvantes
AU Leal, A. T.; Santurio, J. M.; Leal, A. B. M.; Pinto, A. M.; Griebeler, J.; Flores, E. F.; Ferreiro, L.; Catto, J. B.
CS Laboratorio de Pesquisas Micologicas (LAPEMI), Departamento de Microbiologia e Parasitologia, Universidade Federal de Santa Maria (UFSM), Santa Maria, RS, Brazil.
SO Ciencia Rural, (2002) Vol. 32, No. 6, pp. 1027-1032. 23 ref.
Publisher: Centro de Ciencias Rurais, Universidade Federal de Santa Maria. Santa Maria
ISSN: 0103-8478
CY Brazil
DT Journal
LA Portuguese
SL English
AB Pythium insidiosum is a zoosporic fungi living in flooded areas which can infect humans and animals. Natural infection in these species results in clinical **pythiosis**, a granulomatous disease of difficult treatment. Immunotherapy with antigens obtained from cultures of the agent is a promising alternative therapy. In order to evaluate the effect of adjuvants in the immunologic response to P. insidiosum antigens, 24 rabbits were assigned to four groups and immunized with mycelian mass antigen with each of there adjuvants. Group I: aluminium hydroxide; group

treated cases 8 were cured (88%) (all patients with arterial **pythiosis**), and in dogs of 11 treated cases only 5 responded (45%). These new data, on the curative properties of the **vaccine**, corroborated our previous findings on the specificity of the PIV and also supported our hypothesis that a shift of a T helper 2 response, during natural infection, to a T helper 1 reaction after **vaccination** may be responsible of the PIV's curative properties. These include the switch of the eosinophilic mediated cell response during infection to a mononuclear reaction after injection, a dramatic decline of IgE titers, and the rise and decline of key cytokine molecules. Similar therapeutic cancer **vaccines** are currently under investigation.

L10 ANSWER 9 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 5
AN 2001:521898 BIOSIS
DN PREV200100521898
TI Method and **vaccine** for treatment of **Pythiosis** insidiosi in humans and lower animals.
AU Mendoza, Alberto L. (1)
CS (1) Haslett, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University
PI US 6287573 September 11, 2001
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 11, 2001) Vol. 1250, No. 2, pp. No Pagination. e-file. ISSN: 0098-1133.
DT Patent
LA English
AB A method and **vaccine** for treatment of **pythiosis** in humans and animals is described. In particular a **vaccine** comprising a mixture of extracellular and intracellular proteins is described. The **vaccine** enables cures of chronic **pythiosis** in some patients.

L10 ANSWER 10 OF 18 MEDLINE on STN DUPLICATE 6
AN 2001079601 MEDLINE
DN 21015487 PubMed ID: 11132234
TI Infections in E-beta thalassemia.
AU Wanachiwanawin W
CS Department of Medicine, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand.. siwwn@mahidol.ac.th
SO JOURNAL OF PEDIATRIC HEMATOLOGY/ONCOLOGY, (2000 Nov-Dec) 22 (6) 581-7. Ref: 45
Journal code: 9505928. ISSN: 1077-4114.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200101
ED Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010111
AB Infection is a major complication and the leading cause of death in thalassemia, especially E-beta thalassemia. The spectrum of infections in E-beta thalassemia include mild and severe infections, therapy-related infections such as Yersinia enterocolitica infection associated with desferrioxamine (DFO) therapy, and transfusion-transmitted disease, as well as unique infections such as with **pythiosis**. Prospective studies in Thailand indicate that patients with E-beta thalassemia had more frequent episodes of both mild and severe infections. The former included upper respiratory tract infection, acute gastroenteritis, cutaneous abscess, and gingivitis. Severe infections occurred more

DT Journal; General Review
FS 004 Microbiology
017 Public Health, Social Medicine and Epidemiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LA English
SL English; French
AB **Pythiosis** insidiosi is a disease of animals and humans in the tropical, subtropical and temperate areas of the world. It is caused by Pythium insidiosum an organism in the Kingdom Chromista, Phylum Pseudofungi, Class Oomycetes, Family Pythiaceae. The first observations of this disease took place during the last century in equines afflicted with cutaneous granulomas. Pythium insidiosum was first isolated by Haan and Hoogkamer, but they failed to identify it as their cultures were sterile. Several years later Bridges and Emmons isolated a similar organism from equine granulomas in Texas. They proposed the term Hyphomyces destruens, an illegitimate designation based on the disease name 'hyphomycosis destruens equi' coined by early workers. Austwick and Copland in 1974 successfully stimulated the production of zoospores that were similar to those produced by members of the genus Pythium, in a filamentous microorganism they had isolated from horses with swamp cancer in New Guinea. More recently, de Cock et al. proposed the name P. insidiosum to include all strains isolated from all cases of **pythiosis** insidiosi. The disease has been reported in such animals as: cats, cattle, dogs, horses, captive polar bears, and in humans. This review deals with **pythiosis** insidiosi most important aspects including the biology and life cycle of P. insidiosum, as well as the epidemiology, clinical signs, pathology, diagnosis (animal inoculation, mycology and serology), and treatment of this disease once known as an exotic illness of tropical countries.

L10 ANSWER 14 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 8
AN 1993:28524 BIOSIS
DN PREV199395016724
TI Immunoblot analysis of the humoral immune response to Pythium insidiosum in horses with **pythiosis**.
AU Mendoza, Leonel (1); Nicholson, Vivian; Prescott, John F.
CS (1) Dep. Microbiology, University Texas Austin, Austin, Tex. 78712-1095
SO Journal of Clinical Microbiology, (1992) Vol. 30, No. 11, pp. 2980-2983. ISSN: 0095-1137.
DT Article
LA English
AB Reactions to Pythgium insidiosum by sera from horses with active **pythiosis** were investigated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) and immunoblotting. Five strains of P. insidiosum were grown in nutrient broth and then sonicated. After centrifugation, supernatant antigens were separated by SDS-PAGE. An exoantigen of Conidiobolus coronatus was also tested. Bands with molecular weights between 97,000 and 14,000 were identified by Coomassie blue and silver staining. After being transferred to nitrocellulose, the antigens were reacted against sera from six horses with **pythiosis**, sera from four horses cured a year earlier by **vaccination**, and sera from five healthy horses. The sera from horsses with **pythiosis** recognized at least 20 antigens in all strains. Three antigens with molecular weights of 32,000, 30,000, and 28,000 appeared to be immunodominant and specific. Sera from horses cured by immunotherapy showed only five very weak bands, three of them the 32,000-molecular-weight (32K), 30K, and 28K antigens. No bands were observed with sera from healthy horses or sera from horses with a variety of other infections. Sera from horses with **pythiosis** cross-reacted with the 44K antigen of C. coronatus. The immunodominant antigens described here may be useful for diagnostic purposes and in immunotherapy for this oomycotic

infection in horses.

L10 ANSWER 15 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 9
AN 1992:505874 BIOSIS
DN BA94:124399
TI EVALUATION OF TWO **VACCINES** FOR THE TREATMENT OF **PYTHIOSIS** INSIDIOSI IN HORSES.
AU MENDOZA L; VILLALOBOS J; CALLEJA C E; SOLIS A
CS DEP. MICROBIOL., UNIV. TEX. AUSTIN, AUSTIN, TEX. 78712-1095, USA.
SO MYCOPATHOLOGIA, (1992) 119 (2), 89-95.
CODEN: MYCPAH. ISSN: 0301-486X.
FS BA; OLD
LA English
AB Two **vaccines** to treat **pythiosis** insidiosi in horses were evaluated in 71 Costa Rican horses between 1982 to 1988. One **vaccine** used a cell-mass (CMV) as antigen and the other a soluble concentrated antigen (SCAV). Both **vaccines** cured horses infected with Pythium insidiosum (p value .apprx. 14%). The age of lesions prior to **vaccination** was important in the response of the horses to immunotherapy. All horses with lesions 0.5 months or less in duration were curred regardless of the **vaccine** used. Horses with lesions two or more months old did not respond to either **vaccine**. The age of the horses did not have any influence on their response to the **vaccinations**. The CMV produced a prominent inflammatory reaction at the side of injection, while the SCAV gave a low inflammatory reaction. In addition, the CMV lost its effectiveness two to three weeks after its preparation. By contrast, the SCAV maintained its ability to cure horses even after 18 months. Immunotherapy using SCAV can thus be used as the **vaccine** of choice in early cases of equine cutaneous **pythiosis** insidiosi.

L10 ANSWER 16 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 10
AN 1990:415869 BIOSIS
DN BA90:76670
TI AIDS AND TROPICAL DISEASES MELIOIDOSIS **PYTHIOSIS** AND PENICILLIOSIS.
AU TANPHAICHITRA D
CS MAHIDOL UNIV., P.O. BOX 4-217, BANGKOK 10400 THAILAND.
SO ARCH AIDS RES, (1990) 4 (1-2), 77-92.
CODEN: AARSE9.
FS BA; OLD
LA English
AB Patients with defective T-cell functions are more susceptible to intracellular and related tropical infections. Pseudomonas pseudomallei (melioidosis agent) and Penicillium marneffei are two common intracellular infections in the tropics. This study deals with AIDS patients infected with recurdescent melioidosis and with penicilliosis. Since Ps. pseudomallei produces a characteristic antigen, we modified the GalE Salmonella typhi Ty21a oral **vaccine** strain, as to be protective against melioidosis, in a conjugal DNA transfer experiment. Patients treated with four doses of this bivalent **vaccine** strain developed antibody against Ps. pseudomallei up to 70%. Four thalassemic patients with or without hemoglobinopathy infected with Pythium insidiosum, an aquatic Phycomycetes, and one patient with corneal **pythiosis** are described. Cellular immunity testing in AIDS patients with recrudescent melioidosis, with penicilliosis and patients with **pythiosis** revealed abnormal values.

L10 ANSWER 17 OF 18 CABA COPYRIGHT 2003 CABI on STN
AN 85:22762 CABA
DN 852255483

TI A report of subcutaneous **pythiosis** in five dogs and a review of the etiologic agent Pythium spp
AU Foil, C. S. O.; Short, B. G.; Fadok, V. A.; Kunkle, G. A.
CS Dep. Med., Coll. Vet. Med., Univ., Gainesville, Florida 32610, USA.
SO Journal of the American Animal Hospital Association, (1984) Vol. 20, No. 6, pp. 959-966. 39 ref.
ISSN: 0587-2871
DT Journal
LA English
AB The gross and microscopic appearance of skin lesions in 5 dogs is described. The lesions penetrated the deep dermis, where there were multifocal areas of necrosis and a severe inflammatory reaction. The superficial layers of skin were frequently sloughed off. Treatment with amphotericin B and, in one case, with a **vaccine** made from a Pithium isolate, was unsuccessful. In the only surviving dog, surgery and immunotherapy were also used. In each case a diagnosis of Hyphomyces destruens was made. The taxonomic status of the organism(s) so named is discussed. It is proposed that where the causative organism is identified as Pithium sp (as in these 5 cases), the term **pythiosis** be applied to the disease, instead of the less specific terms phycomycosis or zygomycosis.

L10 ANSWER 18 OF 18 MEDLINE on STN DUPLICATE 11
AN 83238052 MEDLINE
DN 83238052 PubMed ID: 6863139
TI Complications associated with immunotherapy of equine phycomycosis.
AU Miller R I; Wold D; Lindsay W A; Beadle R E; McClure J J; McClure J R; McCoy D J
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (1983 Jun 1) 182 (11) 1227-9.
Journal code: 7503067. ISSN: 0003-1488.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198308
ED Entered STN: 19900319
Last Updated on STN: 19990129
Entered Medline: 19830817
AB Five horses with **pythiosis** of the limbs were treated unsuccessfully by surgery or topical application of amphotericin B, or both. Follow-up immunotherapy resulted in 1 horse responding favorably. Three horses were cured of the fungal infection but developed osteitis or deep-seated laminitis, which necessitated their destruction. The remaining horse, which had severe anemia, died before the course of **vaccination** was completed.

=> d his

(FILE 'HOME' ENTERED AT 11:23:34 ON 04 AUG 2003)

FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS, LIFESCI, CAPLUS' ENTERED AT 11:23:58 ON 04 AUG 2003
E MENDOZA ALBERTO L/AU
L1 14 S E2-E4
E MENDOZA A L/AU
L2 7 S E3
L3 21 S L1-L2
L4 9 S L3 AND PYTHIOSIS
L5 3 DUP REM L4 (6 DUPLICATES REMOVED)
L6 321 S PYTHIOSIS
L7 69 S L6 AND ANTIGEN?

L8 26 DUP REM L7 (43 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 11:32:09 ON 04 AUG 2003

FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS, LIFESCI, CAPLUS' ENTERED AT 11:41:14 ON 04 AUG 2003
L9 41 S L6 AND VACCIN?
L10 18 DUP REM L9 (23 DUPLICATES REMOVED)

=> s l6 and (treat? or vaccin? or prophyla? or antigenic or immunogenic)
9 FILES SEARCHED...
L11 135 L6 AND (TREAT? OR VACCIN? OR PROPHYLA? OR ANTIGENIC OR IMMUNOGENIC)

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12 60 DUP REM L11 (75 DUPLICATES REMOVED)

=> d bib ab 1-60

L12 ANSWER 1 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 1
AN 2003:324097 BIOSIS
DN PREV200300324097
TI An improved Pythium insidiosum-**vaccine** formulation with enhanced immunotherapeutic properties in horses and dogs with **pythiosis**.
AU Mendoza, Leonel (1); Mandy, William; Glass, Robert
CS (1) Medical Technology Program, Department of Microbiology and Molecular Genetics, Michigan State University, 322 N. Kedzie Laboratory, East Lansing, MI, 48824-1031, USA: mendoza9@msu.edu USA
SO Vaccine, (20 June 2003) Vol. 21, No. 21-22, pp. 2797-2804. print. ISSN: 0264-410X.
DT Article
LA English
AB The immunotherapeutic properties of a new Pythium insidiosum-**vaccine** formulation (PIV), was evaluated in 18 horses and 6 dogs with proven **pythiosis** from different enzootic areas in the United States. All injected horses but one responded with a weak (= 29 mm, n = 3), a mild (30-90 mm, n = 7) or a strong (= 100 mm, n = 7) inflammatory reactions at the site of injection. Three equines with weak or negative reactions at the injection site were not cured. Seven equines with strong reactions at their injection sites, however, were cured. Six of the eight horses with mild reactions were also cured. The remaining two equines responded at first but both relapsed and finally died of their infections. The PIV cured only two of the six dogs used in this study. The new PIV formulation cured 72% of the equines (P = 0.048) and 33% of the dogs with **pythiosis**. Dogs with chronic disease (greater than two months) did not responded to immunotherapy. The finding of eosinophils, mast cells, IgE and precipitin IgG during **pythiosis** suggested that a T helper 2 (Th2) subset is in place during this disease. In cured horses, the eosinophilic reaction was substituted by lymphocytes and mononuclear macrophages (Th1). This and previous studies strongly support the hypothesis that an immune-modulation from a Th2 to a Th1 subsets may be in part responsible for the PIV's curative properties.

L12 ANSWER 2 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 2
AN 2003:281470 BIOSIS
DN PREV200300281470
TI Three types of immunotherapics against **pythiosis** insidiosi developed and evaluated.
AU Santurio, J. M. (1); Leal, A. T.; Leal, A. B. M.; Festugatto, R.; Lubeck, I.; Sallis, E. S. V.; Copetti, M. V.; Alves, S. H.; Ferreiro, L.

CS (1) Laboratorio de Pesquisas Micologicas, Universidade Federal de Santa Maria, 97105-900, Santa Maria, RS, Brazil: santurio@smail.ufsm.br Brazil
SO Vaccine, (2 June 2003) Vol. 21, No. 19-20, pp. 2535-2540. print.
ISSN: 0264-410X.
DT Article
LA English
AB **Pythiosis** is a granulomatous disease of horses, cattle, dogs, cats and humans identified in tropical and subtropical areas and caused by Pythium insidiosum, a zoosporic fungus. Experimental models of **pythiosis** in naturally infected species have not yet been reported but, rabbits maybe inoculated with zoospores as an experimental model for studying the disease. The present study evaluates the efficacy of three different of immunotherapics in the rabbit model. Approximately 17,500 zoospores of oomycete P. insidiosum (CBS 101555 strain) were inoculated in each animal to generate the disease. Immunotherapics were produced from vortexed or sonicated cultures of the same strain. Four groups of five animals were employed: group 1, placebo; group 2, sonicated immunotherapic; group 3, mixed immunotherapic; and group 4, vortexed immunotherapic. All rabbits were inoculated with viable zoospores one month before administration of the immunotherapics. Eight doses of immunotherapic or placebo were used in each animal with a 14 day interval between injections. Rabbits receiving the vortexed immunotherapic were most effectively protected ($P < 0.05$), showing a decrease in the area of coastal nodules due to **Pythiosis** insidiosum by 71.8% after 26 weeks of evaluation. Moreover, two animals in this group showed complete remission of the infection at the end of the 26 weeks. In contrast to these findings, rabbits given the sonicated immunotherapic did not show any protection and had an increase of 211.8% in the size of lesions. This failure of sonicated immunotherapic may reflect denaturation of protective antigens due to the sonication method.

L12 ANSWER 3 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 2003:105958 CABA
DN 20033074584
TI Equine cutaneous **pythiosis**
AU Poole, H. M.; Brashier, M. K.
CS Mississippi State University, Mississippi, USA.
SO Compendium on Continuing Education for the Practicing Veterinarian, (2003) Vol. 25, No. 3, pp. 229-236, 228. 26 ref.
Publisher: Veterinary Learning Systems Inc. Trenton
ISSN: 0193-1903
CY United States
DT Journal
LA English
AB Equine cutaneous **pythiosis**, formerly referred to as a form of phycomycosis, is caused by a fungus-like organism (Pythium insidiosum). It is a globally distributed disease that occurs most commonly in tropical and subtropical regions of the world. It usually involves only the skin and subcutaneous tissues, but it is aggressive and can progress to deeper structures such as tendons, joints, and bones. Cutaneous **pythiosis** lesions are similar in appearance to those of many other common equine skin diseases and are often misdiagnosed. Diagnosis and initiation of **treatment** must be rapid for successful resolution of lesions. Diagnosis can be made via gross appearance and location of lesions, histopathology, culture, immunohistochemical staining, agar gel immunodiffusion testing, immunoblot analysis, and polymerase chain reaction assay. Cutaneous **pythiosis** lesions in horses are best **treated** with a combination of therapies, including radical surgical excision, topical application of antifungal solutions, and immunotherapy. Prognosis of horses affected with cutaneous **pythiosis** is good if the disease is recognized early and **treated** aggressively with combination therapy.

L12 ANSWER 4 OF 60 MEDLINE on STN DUPLICATE 3
AN 2003343110 IN-PROCESS
DN 22757379 PubMed ID: 12875449
TI Immunotherapy for **treatment** of multicentric cutaneous **pythiosis** in a dog.
AU Hensel Patrick; Greene Craig E; Medleau Linda; Latimer Kenneth S; Mendoza Leonel
CS Department of Small Animal Medicine, College of Veterinary Medicine, University of Georgia, Athens, GA 30602, USA.
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (2003 Jul 15) 223 (2) 215-8, 197.
Journal code: 7503067. ISSN: 0003-1488.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20030724
Last Updated on STN: 20030724
AB A 4-year-old Labrador Retriever was referred for evaluation of 2 ulcerative nodular cutaneous lesions. One lesion was located on the medial aspect of the right carpus; the other was located on the medial aspect of the left tarsus. The dog had spent its entire life in the southeastern part of the United States and approximately half of its time outdoors with free access to a nearby lake. Histologic examination of full-thickness wedge biopsy specimens from both lesions revealed severe, multifocal, puruloeosinophilic to pyogranulomatous deep dermatitis with intralesional filamentous structures, fibroplasia, and neovascularization. Examination of sections stained with Gomori methenamine silver stain revealed a moderate number of wide, bulbous, irregularly septate, branching hyphae. Results of an immunodiffusion test and an ELISA for anti-Pythium insidiosum antibodies were positive. Amputation was eliminated as a **treatment** option because lesions involved 2 limbs. Long-term systemic antifungal **treatment** was also rejected because of the cost, lack of therapeutic effect in many cases, and potential for adverse effects. The dog was **treated** with 2 doses of an anti-P insidiosum **vaccine** administered 2 weeks apart. One month later, the lesions were nearly completely healed, and values obtained via the immunodiffusion test and ELISA had decreased. Results of the immunodiffusion test and ELISA were negative 1 year later, and the dog had not had any recurrences.

L12 ANSWER 5 OF 60 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN DUPLICATE 4
AN 2002-626529 [67] WPIDS
CR 1999-526385 [44]; 2002-054339 [07]
DNC C2002-176584
TI **Treating** or preventing **pythiosis** in a mammal, comprises administering a **vaccine** containing intracellular cytoplasmic antigens from disrupted cells of Pythium insidiosum, and extracellular antigens secreted by P. insidiosum.
DC B04 C06 D16
IN MENDOZA, A L
PA (UNMS) UNIV MICHIGAN STATE
CYC 1
PI US 2002081308 A1 20020627 (200267)* 20p
ADT US 2002081308 A1 Div ex US 1997-895940 19970717, CIP of US 1998-82232 19980520, Provisional US 2000-245936P 20001103, US 2001-998822 20011101
PRAI US 2000-245936P 20001103; US 1997-895940 19970717; US 1998-82232 19980520; US 2001-998822 20011101
AB US2002081308 A UPAB: 20021018
NOVELTY - A method of **treatment** for **pythiosis** or **prophylaxis** against **pythiosis** in a mammal, comprises administering to the patient a **vaccine** comprising intracellular cytoplasmic antigens separated from disrupted cells of Pythium insidiosum,

and extracellular antigens secreted into a medium for growing cells of P. insidiosum in a sterile aqueous solution.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method for providing an injectable **vaccine** for **treating** or preventing **pythiosis**;

(a) growing the cells of P. insidiosum in a culture medium;

(b) separating the cells from a first supernatant of the culture medium, which contains extracellular proteins;

(c) killing the cells;

(d) disrupting the cells in sterile distilled water;

(e) separating the disrupted cells from the water to produce a second supernatant containing intracellular proteins;

(f) mixing the first supernatant in (b) with the second supernatant in (e);

(g) separating the combined proteins from the mixture of (f);

(h) mixing the separated proteins in sterile distilled water; and

(i) dialyzing the mixture to remove low molecular weight components less than 10000 MW to produce the **vaccine**;

(2) a method of testing a response in a mammal to P. insidiosum **vaccine** by monitoring a Th1 and a Th2 response of the mammal, where the Th1 response increases and the Th2 decreases in mammals which are responding to the **vaccine**;

(3) a mammal model for testing a P. insidiosum **vaccine** comprising monitoring a Th1 and a Th2 response of the mammal to the **vaccine**, where the Th1 response increases and the Th2 decreases in mammals which are responding to the **vaccine**.

ACTIVITY - Fungicide.

MECHANISM OF ACTION - **Vaccine**.

A Thai boy diagnosed with **pythiosis** insidiosi in his external carotid artery was administered subcutaneously with 2 mg/ml P. insidiosum **vaccine**. Twenty hours after **vaccination**, a weal and flare reaction had developed at the injection site, and 48 hours post **vaccination**, wheal reaction attained its maximum size of 11 cm in diameter. No other side effects occurred except itching at the **vaccination** site. Fourteen days after the first dose, facial and tongue swelling had diminished. A second **vaccination** was given to the patient on the same day, and after 48 hours, a wheal reaction attained a diameter of 8 cm. After 2 weeks, patient's headache disappeared, facial and left tongue swelling were dramatically diminished, and the enlarged cervical lymph node had reduced in size. Patient was considered clinically cured 1 year after the first **vaccination**.

USE - The **vaccine** and the method are useful for **treating** or preventing **pythiosis** (claimed).

ADVANTAGE - Unlike previous **vaccines**, which can only cure early stage of **pythiosis**, the present **vaccine**, is able to cure patients who are in chronic stage of the disease.

Dwg.0/2

L12 ANSWER 6 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:262085 BIOSIS
DN PREV200300262085
TI Immunotherapy for fungal infections.
AU Casadevall, Arturo (1)
CS (1) Department of Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, NY, USA USA
SO Jacobson, Jeffrey M. [Editor]. (2002) pp. 303-322. Infectious Disease. Immunotherapy for infectious diseases. print.
Publisher: Humana Press Inc. 999 Riverview Drive, Suite 208, Totowa, NJ, 07512, USA.
ISBN: 0-89603-669-3 (cloth).
DT Book
LA English

L12 ANSWER 7 OF 60 MEDLINE on STN
AN 2002250183 MEDLINE
DN 21986361 PubMed ID: 11990966
TI Duodenal obstruction caused by infection with Pythium insidiosum in a 12-week-old puppy.
AU Liljebjelke Karen A; Abramson Carley; Brockus Charles; Greene Craig E
CS Department of Medical Microbiology and Parasitology, College of Veterinary Medicine, University of Georgia, Athens 30602, USA.
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (2002 Apr 15) 220 (8) 1188-91, 1162.
Journal code: 7503067. ISSN: 0003-1488.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200208
ED Entered STN: 20020507
Last Updated on STN: 20020807
Entered Medline: 20020806
AB Pythium insidiosum is an aquatic fungus-like organism that causes a serious chronic granulomatous disease called **pythiosis** in animals and humans in tropical and subtropical regions of the world. In North America, **pythiosis** is most often diagnosed in the Gulf Coast states. Early recognition of the disease is crucial to successful **treatment**, which includes surgical resection of granulomatous lesions and administration of antifungal agents. Despite increasing availability of diagnostic tests, intestinal **pythiosis** is insidious and is often not detected until lesions are extensive. Intestinal **pythiosis** was diagnosed in a 12-week-old puppy from South Carolina examined because of vomiting, diarrhea, and anorexia. **Pythiosis** was not initially suspected because of the young age of the patient and because **pythiosis** is uncommon in this area.

L12 ANSWER 8 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:313653 BIOSIS
DN PREV200200313653
TI Duodenal obstruction caused by infection with Pythium insidiosum in a 12-week-old puppy.
AU Liljebjelke, Karen A. (1); Abramson, Carley; Brockus, Charles; Greene, Craig E.
CS (1) Department of Medical Microbiology and Parasitology, College of Veterinary Medicine, University of Georgia, Athens, GA, 30602 USA
SO Journal of the American Veterinary Medical Association, (April 15, 2002) Vol. 220, No. 8, pp. 1162, 1188-1191. http://www.avma.org. print.
ISSN: 0003-1488.
DT Article
LA English
AB Pythium insidiosum is an aquatic fungus-like organism that causes a serious chronic granulomatous disease called **pythiosis** in animals and humans in tropical and subtropical regions of the world. In North America, **pythiosis** is most often diagnosed in the Gulf Coast states. Early recognition of the disease is crucial to successful **treatment**, which includes surgical resection of granulomatous lesions and administration of antifungal agents. Despite increasing availability of diagnostic tests, intestinal **pythiosis** is insidious and is often not detected until lesions are extensive. Intestinal **pythiosis** was diagnosed in a 12-week-old puppy from South Carolina examined because of vomiting, diarrhea, and anorexia. **Pythiosis** was not initially suspected because of the young age of the patient and because **pythiosis** is uncommon in this area.

L12 ANSWER 9 OF 60 CABA COPYRIGHT 2003 CABI on STN

AN 2003:7682 CABA
DN 20023170468
TI Serological response in rabbits immunized with Pythium insidiosum antigens associated with different adjuvants
Resposta sorologica de coelhos imunizados com antigenos de Pythium insidiosum associados a diferentes adjuvantes
AU Leal, A. T.; Santurio, J. M.; Leal, A. B. M.; Pinto, A. M.; Griebeler, J.; Flores, E. F.; Ferreiro, L.; Catto, J. B.
CS Laboratorio de Pesquisas Micologicas (LAPEMI), Departamento de Microbiologia e Parasitologia, Universidade Federal de Santa Maria (UFSM), Santa Maria, RS, Brazil.
SO Ciencia Rural, (2002) Vol. 32, No. 6, pp. 1027-1032. 23 ref.
Publisher: Centro de Ciencias Rurais, Universidade Federal de Santa Maria. Santa Maria
ISSN: 0103-8478
CY Brazil
DT Journal
LA Portuguese
SL English
AB Pythium insidiosum is a zoosporic fungi living in flooded areas which can infect humans and animals. Natural infection in these species results in clinical **pythiosis**, a granulomatous disease of difficult **treatment**. Immunotherapy with antigens obtained from cultures of the agent is a promising alternative therapy. In order to evaluate the effect of adjuvants in the immunologic response to P. insidiosum antigens, 24 rabbits were assigned to four groups and immunized with mycelian mass antigen with each of there adjuvants. Group I: aluminium hydroxide; group II: Freund's adjuvant; group III: mineral oil and group IV: distilled water-control. The effects of the adjuvants were evaluated by measuring the levels of anti-pythium immunoglobulin G (IgG) produced by the immunized rabbits at different time-points after immunization, using an ELISA test. During phase 1, the animals were immunized three times (days zero, 14 and 28) and serologically tested at days 14, 21, 28 and 35. The oil adjuvants (groups II and III) were statistically superior to groups I and IV. During phase 2 (from day 42 to 120) each group was subdivided in two, with one subgroup having additional immunizations at days 42, 56, 68 and 82 and the other having the **treatment** interrupted. Among the rabbits with continued immunizations, groups I, II and III (adjuvants) had statistically higher IgG levels than GIV. Among rabbits with interrupted **treatment**, GI, GII and presented stable IgG levels and were statistically superior to the control group, that presented decrease in the levels. These results demonstrated that the adjuvants were capable of inducing stronger and longer immunologic responses (IgG) to P. insidiosum antigens. Therefore, the use of adjuvants associated with P. insidiosum antigens may increase the recovery rates obtained through immunotherapy.

L12 ANSWER 10 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN DUPLICATE 5
AN 2003:8733 AGRICOLA
DN IND23304640
TI **Treatment** of equine **pythiosis**.
AU Hubert, J.D.; Grooters, A.M.
AV DNAL (SF601.C66)
SO The Compendium on continuing education for the practicing veterinarian, Oct 2002. Vol. 24, No. 10. p. 812-815
Publisher: Trenton, N.J. : Veterinary Learning Systems.
ISSN: 0193-1903
NTE Includes references
CY New Jersey; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension

LA English

L12 ANSWER 11 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 6
AN 2002:239726 BIOSIS
DN PREV200200239726
TI Development and evaluation of an in-house enzyme-linked immunosorbent assay for early diagnosis and monitoring of human **pythiosis**.
AU Krajaejun, Theerapong (1); Kunakorn, Mongkol; Niemhom, Sopaporn; Chongtrakool, Piriyaporn; Pracharktam, Roongnapa
CS (1) Clinical Immunology Laboratory, Department of Pathology, Faculty of Medicine, Ramathibodi Hospital, 270 Rama VI Road, Bangkok, 10400: mr_en@hotmail.com Thailand
SO Clinical and Diagnostic Laboratory Immunology, (March, 2002) Vol. 9, No. 2, pp. 378-382. print.
ISSN: 1071-412X.
DT Article
LA English
AB Human **pythiosis** is an emerging, fatal, infectious disease caused by Pythium insidiosum and occurs in both tropical and subtropical countries. Thalassemic patients, farmers, and aquatic-habitat residents are predisposed to this disease. Delayed **treatment** due to the long time required for isolation and identification of the causative organism, as well as the difficulty in obtaining internal organ specimens, results in high morbidity and mortality. To facilitate rapid diagnosis, an in-house enzyme-linked immunosorbent assay (ELISA) for the detection of immunoglobulin G antibodies against P. insidiosum was developed and evaluated for the diagnosis and monitoring of human **pythiosis**. Sixteen sera were collected from seven culture-proven human **pythiosis** cases. A total of 142 sera from thalassemic patients, from patients with other infectious diseases, and from healthy blood donors served as controls. All sera were tested in duplicate. By choosing a suitable cutoff point to maximize sensitivity and specificity, sera from **pythiosis** cases were all determined to be positive, whereas sera from control groups were all determined to be negative. ELISA signals from serial samples of sera taken from **treated** patients showed gradually declining levels of antibodies to P. insidiosum. The ELISA test was highly sensitive (100%) and specific (100%) and was useful for early diagnosis and for monitoring the **treatment** for **pythiosis**
.

L12 ANSWER 12 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:597131 BIOSIS
DN PREV200200597131
TI Development of a simplified latex agglutination test for the rapid diagnosis of infections caused by Pythium insidiosum.
AU Hutchens, M. (1); Mendoza, L. (1)
CS (1) Michigan State University, East Lansing, MI USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 214-215. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English
AB Pythium insidiosum is an emerging pathogen that causes life-threatening infections in humans and other animals. If the infections are not **treated** in their early stages of the infection, the disease is more difficult to **treat** with drugs or by immunotherapy. Several serological assays were developed and used during the past 10 years for its diagnosis. These included an immunodiffusion test, an enzyme

linked-immunosorbent assay, fluorescent antibodies and a western blot. Although all these tests proved to be specific for **pythiosis** and successful in detecting antibodies or the antigens of P. insidiosum, the main problem has been that those tests had to be performed by qualified laboratories and professionals. Based on the fact that an early diagnosis would be advantageous for the rapid **treatment** of patients with life-threatening **pythiosis**, we developed a latex agglutination test to detect anti-P. insidiosum antibodies in those patients. This agglutination test proved to be very sensitive and discriminated well between sera from apparently healthy humans and sera from equines with **pythiosis**. Currently, the specificity of the test is under evaluation. The development of a P. insidiosum-latex agglutination test will allow clinicians to perform this test in their clinical settings, thus shorting the time between diagnosis and **treatment**. Specialized laboratories could later confirm their presumptive diagnoses.

L12 ANSWER 13 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:597110 BIOSIS
DN PREV200200597110
TI Immunotherapy, an approach to **treat** the infections caused by Pythium insidiosum.
AU Mendoza, L. (1)
CS (1) Michigan State University, East Lansing, MI USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 211. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English
AB Immunotherapy, using antigens from cultures of the human and animal pathogen Pythium insidiosum (PIV), showed that infected hosts with **pythiosis** reacted to injected immunogens by triggering an immune response that resulted in cure. Early observations on the therapeutic features of the PIV in equines with **pythiosis** indicated that the eosinophilic reaction, observed during natural infection, was always substituted by a mononuclear reaction after successful **treatment** . Since them, we have used the **vaccine** in apprx500 horses, 11 dogs and 9 humans. In equines, the efficacy of the PIV was around 70%, in humans of 9 **treated** cases 8 were cured (88%) (all patients with arterial **pythiosis**), and in dogs of 11 **treated** cases only 5 responded (45%). These new data, on the curative properties of the **vaccine**, corroborated our previous findings on the specificity of the PIV and also supported our hypothesis that a shift of a T helper 2 response, during natural infection, to a T helper 1 reaction after **vaccination** may be responsible of the PIV's curative properties. These include the switch of the eosinophilic mediated cell response during infection to a mononuclear reaction after injection, a dramatic decline of IgE titers, and the rise and decline of key cytokine molecules. Similar therapeutic cancer **vaccines** are currently under investigation.

L12 ANSWER 14 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 7
AN 2002:230080 BIOSIS
DN PREV200200230080
TI Development and evaluation of an enzyme-linked immunosorbent assay for the serodiagnosis of **pythiosis** in dogs.
AU Grooters, Amy M. (1); Leise, Britta S.; Lopez, Mae K.; Gee, Melaney K.; O'Reilly, Kathy L.
CS (1) Veterinary Clinical Sciences, Louisiana State University, Baton Rouge, LA, 70803-8410: agrooters@vetmed.lsu.edu USA

SO Journal of Veterinary Internal Medicine, (March April, 2002) Vol. 16, No. 2, pp. 142-146. print.
ISSN: 0891-6640.
DT Article
LA English
AB **Pythiosis** (caused by the aquatic oomycete Pythium insidiosum) is a devastating and often fatal cause of either severe transmural gastroenteritis or locally invasive subcutaneous disease in dogs living in the southeastern United States. Although early diagnosis is essential for successful **treatment**, tools available for this task are limited. Therefore, we developed and evaluated an enzyme-linked linked immunosorbent assay (ELISA) for the detection of anti-P insidiosum antibodies in canine serum. A soluble mycelial extract of P insidiosum was utilized as antigen in the ELISA, which was used to evaluate serum from 43 dogs with **pythiosis**, 8 dogs with lagenidiosis (another canine oomycosis), 16 dogs with nonoomycotic fungal or algal infections, 22 dogs with nonfungal gastro-intestinal or skin disease, and 55 healthy dogs. Results were expressed as percent positivity (PP) relative to a strong positive control serum run on each plate. Medians and ranges for each of the 5 groups were as follows: **pythiosis** (81.7%, 50.6-98.5%), lagenidiosis (17.3%, 11.3-29.2%), other fungal or algal infections (8.2%, 4.7-15.4%), nonfungal gastrointestinal or skin disease (6.2%, 3.9-20.7%), and healthy dogs (6.7%, 3.0-15.2%). When using a cutoff value of 40% PP, the sensitivity and specificity of the ELISA both were 100%. In addition, ELISA values measured after successful surgical therapy therapy in 2 dogs showed a decrease of anti-P insidiosum antibody concentrations into the normal range as early as 2 months after **treatment**. We conclude that the ELISA is a sensitive and specific test for the diagnosis of canine **pythiosis**, and may be a useful tool for monitoring response to medical or surgical therapy.

L12 ANSWER 15 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 2002:181386 CABA
DN 20023122141
TI **Pythiosis**
Pythiosis
AU Gobble, R. J.; Wilkins, E. B.; Bemis, A. D.
SO Selecciones Veterinarias, (2002) Vol. 10, No. 1, pp. 3-6. translation from Veterinary Medicine (1998) 93 (11) (En). 12 ref.
Publisher: Editorial Inter-Medica S.A.I.C.I. Buenos Aires
ISSN: 0327-859X
CY Argentina
DT Journal
LA Spanish
AB A case report of cutaneous **pythiosis** (Pythium insidiosum) affecting the perianal region of a dog is described, with a description of the clinical aspects, histopathology, differential diagnosis and **treatment** of the disease.

L12 ANSWER 16 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 8
AN 2001:521898 BIOSIS
DN PREV200100521898
TI Method and **vaccine** for **treatment** of **Pythiosis** insidiosi in humans and lower animals.
AU Mendoza, Alberto L. (1)
CS (1) Haslett, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University
PI US 6287573 September 11, 2001
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 11, 2001) Vol. 1250, No. 2, pp. No Pagination. e-file.
ISSN: 0098-1133.
DT Patent

LA English
AB A method and **vaccine** for **treatment** of **pythiosis** in humans and animals is described. In particular a **vaccine** comprising a mixture of extracellular and intracellular proteins is described. The **vaccine** enables cures of chronic **pythiosis** in some patients.

L12 ANSWER 17 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 2001:123391 CABA
DN 20013121766
TI **Pythiosis**
Pitiose
AU Leal, A. T.; Leal, A. B. M.; Flores, E. F.; Santurio, J. M.
CS Laboratorio de Pesquisas Micologicas (LAPEMI), Universidade Federal de Santa Maria (UFSM), 97105-900, Santa Maria, RS, Brazil.
SO Ciencia Rural, (2001) Vol. 31, No. 4, pp. 735-743. 68 ref.
ISSN: 0103-8478
DT Journal
LA Portuguese
SL English
AB **Pythiosis** is a chronic granulomatous disease mainly of the subcutaneous tissue caused by the oomycete Pythium insidiosum. The disease affects humans and several domestic animal species, representing a potential hazard to human and animal health. Horses are the most affected species and equine **pythiosis** has been frequently described in Brazil. The disease is characterized by unresponsiveness to traditional therapies since antifungal drugs are not active against P. insidiosum. Recently, immunotherapy has emerged as a promising therapy. An early and accurate diagnosis is pivotal towards a successful **treatment**. This article reviews the main mycological, epidemiological, clinical and pathological aspects of **pythiosis** in different species. The currently available diagnostic techniques and the therapeutical perspectives are also discussed.

L12 ANSWER 18 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 2002:179508 CABA
DN 20023098588
TI Immunotherapy **treatment** of equine **pythiosis**
Tratamento imunoterapico da pitiose Equina
AU Santurio, J. M.; Catto, J. B.; Leal, A. B. M.; Leal, A. T.
CS Adjunto da Universidade Federal de Santa Maria, Campus Universitario Camobi, CEP 97119-900 Santa Maria, RS, Brazil.
SO Comunicado Tecnico - EMBRAPA Gado de Corte, (2001) No. 67, pp. 1-4. 6 ref.
Publisher: EMBRAPA Gado de Corte. Campo Grande
ISSN: 1516-9308
CY Brazil
DT Bulletin
LA Portuguese
AB The Pythium insidiosum fungus occurs in tropical, subtropical and temperate areas and causes lesions in horses, cats, dogs, cattle and humans. Most cases of **pythiosis** occur during periods with high rainfall and high temperatures. An account is given of the **treatment** of **pythiosis** in Brazil, where around 2-5% of horses may be affected. Immunotherapy (an average of 5.3 subcutaneous injections per animal) at 2-week intervals in March-June of 19 affected horses in Matto Grosso resulted in the recovery of 83% of horses with old lesions vs. 60% of those with new lesions. In a further trial, involving 270 horses in the region of Nhecolandia, 38.5% of the horses in the herd were given immunotherapy as a preventative measure, and 61.5% received no **treatment**. During the next 6 months, 6.7% of **treated** and 4.2% of control animals developed the disease, indicating the inefficiency of preventative immunotherapy. Of the 16 affected animals **treated** with immunotherapy after diagnosis of lesions, 87.5% recovered.

L12 ANSWER 19 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 2000:74121 CABA
DN 20002210979
TI Canine cutaneous **pythiosis**
AU Spodnick, G. J.; Bonagura, J. D. [EDITOR]
CS Department of Surgery, Veterinary Speciality Hospital of the Carolinas, Cary, NC, USA.
SO Kirk's current veterinary therapy XIII: small animal practice, (2000) pp. 313-315.
Publisher: W.B. Saunders. Philadelphia
ISBN: 0-7216-5523-8
CY United States
DT Book; Book Article
LA English

L12 ANSWER 20 OF 60 MEDLINE on STN DUPLICATE 9
AN 2000303392 MEDLINE
DN 20303392 PubMed ID: 10844973
TI **Pythiosis** with bone lesions in a pregnant mare.
AU Worster A A; Lillich J D; Cox J H; Rush B R
CS Department of Clinical Sciences, Veterinary Teaching Hospital, College of Veterinary Medicine, Kansas State University, Manhattan 66506-5606, USA.
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (2000 Jun 1) 216 (11) 1795-8, 1760.
Journal code: 7503067. ISSN: 0003-1488.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200007
ED Entered STN: 20000728
Last Updated on STN: 20000728
Entered Medline: 20000719
AB A 9-year-old pregnant mare was referred for evaluation of a nonhealing wound of 8 weeks' duration on the lateral aspect of the left forelimb. A soft tissue mass encircled the proximal two thirds of the metacarpus; radiography revealed a moderate periosteal reaction affecting metacarpal bone i.v. Histologic and immunohistochemical examinations revealed eosinophilic granulomatous inflammation and Pythium sp in the soft tissues. The mare was **treated** for 12 days with antimicrobials, medicated wound dressings, debridement, and i.v. administration of sodium iodide; radiography revealed progression of the bone lesions. The mare was **treated** by regional arterial perfusion with miconazole and excision of affected soft tissues and the distal two thirds of metacarpal bone i.v. The mare recovered without complications and gave birth to a healthy foal. Regional perfusion of antifungal agents provides high concentrations in soft and osseous tissues and permits use of low dosages of agents administered by other routes, which reduces cost, adverse effects, and teratogenic effects.

L12 ANSWER 21 OF 60 MEDLINE on STN DUPLICATE 10
AN 2001079601 MEDLINE
DN 21015487 PubMed ID: 11132234
TI Infections in E-beta thalassemia.
AU Wanachiwanawin W
CS Department of Medicine, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand.. siwwn@mahidol.ac.th
SO JOURNAL OF PEDIATRIC HEMATOLOGY/ONCOLOGY, (2000 Nov-Dec) 22 (6) 581-7.
Ref: 45
Journal code: 9505928. ISSN: 1077-4114.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200101
ED Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010111
AB Infection is a major complication and the leading cause of death in thalassemia, especially E-beta thalassemia. The spectrum of infections in E-beta thalassemia include mild and severe infections, therapy-related infections such as Yersinia enterocolitica infection associated with desferrioxamine (DFO) therapy, and transfusion-transmitted disease, as well as unique infections such as with **pythiosis**. Prospective studies in Thailand indicate that patients with E-beta thalassemia had more frequent episodes of both mild and severe infections. The former included upper respiratory tract infection, acute gastroenteritis, cutaneous abscess, and gingivitis. Severe infections occurred more commonly in patients with splenectomy and included septicemia, pneumonia, biliary tract infection, salmonellosis, and urinary tract infection. Responsible organisms were Escherichia coli (26%), Klebsiella pneumoniae (23%), Salmonella (15%), and Streptococcus pneumoniae (13%). Other organisms included Pseudomonas, Staphylococci, Burkholderia pseudomallei (melioidosis), and Aeromonas. Patients undergoing DFO therapy are at risk for Y. enterocolitica infection which may be localized to mesenteric nodes and tonsils or occur as a generalized form such as septicemia. Recently, we have seen a unique infection so-called vascular **pythiosis**. Patients usually presented with clinical features of vascular occlusion of lower limbs from ascending arteritis and thrombosis. The causative organism, Pythium insidiosum, is fungus-like, in the kingdom Stramenopila, and in the class Oomycetes. The mortality rate is high and the only effective **treatment** has been early amputation or possibly immunotherapy. The predisposing factors of infections in thalassemia include splenectomy, iron overload, anemia, and granulocyte dysfunctions. General management of infections in thalassemia consist of prevention, i.e., immunization with pneumococcal and hepatitis **vaccines**, oral penicillins especially in patients with splenectomy, removal of predisposing factors such as gallstones, iron overload, and appropriate antibiotics.

L12 ANSWER 22 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 11
AN 2000:268180 BIOSIS
DN PREV200000268180
TI In vitro effect of streptomycin on clinical isolates of Pythium insidiosum.
AU McMeekin, Dorothy (1); Mendoza, Leonel
CS (1) Department of Botany and Plant Pathology, Michigan State University, E. Lansing, MI, 48824 USA
SO Mycologia, (May June, 2000) Vol. 92, No. 3, pp. 371-373. print..
ISSN: 0027-5514.
DT Article
LA English
SL English
AB Pythium insidiosum is the only known species of this genus capable of causing infections in humans, horses, cattle, dogs, cats and captive polar bears. We investigated the growth response of several isolates from clinical cases of **pythiosis** in Costa Rica (one isolate), Thailand (two isolates), and the USA (two isolates, one from Florida and the other from Tennessee), to 100 and 200 mug/mL streptomycin. It was found that one of the Thai P. insidiosum isolates was stimulated, while the other isolate from the same country was inhibited by streptomycin. The isolates from Costa Rica and Florida, USA, were not significantly

affected. Considerable variation in the response of the Tennessee isolate to streptomycin was recorded in P. insidiosum cultures resulting from the transfer of 2 mm2 sections of vegetative growth, suggesting heterozygosity among its nuclei. Calcium did not reverse the inhibition of the Tennessee isolate, as previously reported in other Peronosporalean Oomycetes. Following the addition of calcium, growth enhancement, already stimulated by streptomycin, was observed in one of the Thai isolates. The finding that streptomycin may stimulate the in vitro growth of some P. insidiosum isolates indicates that the indiscriminate use of streptomycin or other antibiotics, to **treat** putative bacterial infections, may be deleterious to patients that may have undiagnosed **pythiosis**.

L12 ANSWER 23 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 2001:78180 CABA
DN 20013064533
TI Zygomycosis and skin **pythiosis** in horses: diagnosis and **treatment**
Zigomicose e pitiose cutanea em equinos: diagnostico e tratamento
AU Rodrigues, C. A.; Luvizotto, M. C. R.
CS Curso de Medicina Veterinaria, Unesp, Departamento de Clinica, Cirurgia e Reproducao Animal, Rua Clovis Pestana, 793 Jardim Dona Amelia, CEP 16050-680, Aracatuba- SP, Brazil.
SO Revista de Educacao Continuada do CRMV-SP, (2000) Vol. 3, No. 3, pp. 3-11. 31 ref.
ISSN: 1516-3326
DT Journal
LA Portuguese
SL English

L12 ANSWER 24 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 12
AN 1999:521514 BIOSIS
DN PREV199900521514
TI Method and **vaccine** for **treatment** of **pythiosis** insidiosi in humans and lower animals.
AU Mendoza, Alberto L. (1)
CS (1) Haslett, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University
PI US 5948413 Sep. 07, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 7, 1999) Vol. 1226, No. 1, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L12 ANSWER 25 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 13
AN 2000:156665 BIOSIS
DN PREV200000156665
TI A description of cutaneous-subcutaneous **pythiosis** in fifteen dogs.
AU Dykstra, M. J. (1); Sharp, N. J. H.; Olivry, T.; Hillier, A.; Murphy, K. M.; Kaufman, L.; Kunkle, G. A.; Pucheu-Haston, C.
CS (1) Microbiology, Pathology and Parasitology Department, College of Veterinary Medicine, North Carolina State University, Raleigh, NC, 27606 USA
SO Medical Mycology., (Dec., 1999) Vol. 37, No. 6, pp. 427-433.
ISSN: 1369-3786.
DT Article
LA English
SL English
AB Information regarding signalment, duration of clinical signs, history of swimming, results of CBC and serum biochemical analyses, biopsy findings

and mycological results, together with **treatments** and outcome, was retrieved from the medical records of 15 dogs with a diagnosis of **pythiosis** made between 1985 and 1995 at the Colleges of Veterinary Medicine, North Carolina State University and the University of Florida. Most of the dogs were young (median age 22 months) and represented larger breeds (> 20 kg). Lesions were characteristically chronic, ulcerated, and nodular with multiple draining tracts on the limbs, thoracic wall or perineal regions. The median duration of these lesions was 3 months with a range of 2 weeks-6 months. Seven dogs had a history of swimming. Peripheral eosinophilia was observed in 14 of the dogs. Cytological evaluation of discharge, aspirates, or impression smears made from biopsy specimens revealed hyphae in five of 11 dogs (45%). Histopathological evaluation using the Gomori Methenamine-Silver (GMS) stain was the most useful test for providing presumptive evidence of cutaneous **pythiosis**. Immunotherapy or antifungal therapy using either amphotericin B, liposomal nystatin, itraconazole, or ketoconazole were all unsuccessful. The only dog to survive underwent amputation of the affected limb; thus, the prognosis for cutaneous **pythiosis** in the dog is poor.

L12 ANSWER 26 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AN 2001:2374 AGRICOLA
DN IND22081935
TI How I **treat**...gastrointestinal **pythiosis**.
AU Taboada, J.
AV DNAL (SF605.N672)
SO Proceedings of the North American Veterinary Conference, 1999. Vol. 13 p. 225-226
Publisher: [Gainesville, Fla.] : Eastern States Veterinary Association, 1992-
NTE Meeting held on Jan. 9-13, 1999, Orlando, Florida.
CY Florida; United States
DT Article; Conference
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 27 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 14
AN 1999:60371 BIOSIS
DN PREV199900060371
TI Successful medical therapy for deeply invasive facial infection due to Pythium insidiosum in a child.
AU Shenep, Jerry L. (1); English, B. Keith; Kaufman, Leo; Pearson, Ted A.; Thompson, Jerome W.; Kaufman, Robert A.; Frisch, Glenn; Rinaldi, Michael G.
CS (1) St. Jude Child. Res. Hosp., 332 N. Lauderdale St., Memphis, TN 38105-2794 USA
SO Clinical Infectious Diseases, (Dec., 1998) Vol. 27, No. 6, pp. 1388-1393. ISSN: 1058-4838.
DT Article
LA English
AB **Pythiosis** occurs in animals and humans who encounter aquatic habitats that harbor Pythium insidiosum. Drug therapy for deeply invasive infections with this organism has been ineffective in humans and animals; patients have been cured only by radical surgical debridement. A 2-year-old boy developed periorbital cellulitis unresponsive to antibiotic and antifungal therapy. The cellulitis extended to the nasopharynx, compromising the airway and necessitating a gastrostomy for feeding. P. insidiosum was isolated from surgical biopsy specimens of the affected tissue. On the basis of in vitro susceptibility studies of the isolate,

the patient was **treated** with a combination of terbinafine and itraconazole. The infection resolved over a period of a few months. The patient remained well 1.5 years after completing a 1-year course of therapy. Cure of deep P. insidiosum infection is feasible with drug therapy.

L12 ANSWER 28 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AN 1999:10319 AGRICOLA
DN IND21963058
TI Cutaneous **Pythiosis** insidiosi in calves from the Pantanal region of Brazil.
AU Santurio, J.M.; Monteiro, A.B.; Leal, A.T.; Kommers, G.D.; Sousa, R.S. de.; Catto, J.B.
CS Universidade Federal de Santa Maria-UFSM, Santa Maria, RS, Brazil.
AV DNAL (450 M994)
SO Mycopathologia, 1998. Vol. 141, No. 3. p. 123-125
Publisher: Dordrecht : Kluwer Academic Publishers.
CODEN: MYCPAH; ISSN: 0301-486X
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L12 ANSWER 29 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 1998:69714 CABA
DN 981200979
TI **Pythiosis** in dogs and cats
AU Thomas, R. C.; Lewis, D. T.
CS Department of Small Animal Clinical Sciences, College of Veterinary Medicine, University of Florida, Gainesville, FL, USA.
SO Compendium on Continuing Education for the Practicing Veterinarian, (1998) Vol. 20, No. 1, pp. 63...75. 53 ref.
ISSN: 0193-1903
DT Journal
LA English
AB Historical aspects of Pythium infections are discussed, and the clinical signs, diagnosis and **treatment** of P. insidiosum infections in dogs and cats are reviewed.

L12 ANSWER 30 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 1998:183242 CABA
DN 981202946
TI Development of **vaccines** and their use in the prevention of fungal infections
AU Dixon, D. M.; Casadevall, A.; Klein, B.; Mendoza, L.; Travassos, L.; Deepe, G. S., Jr.; Polonelli, L. O. [EDITOR]; Walsh, T. J. [EDITOR]
CS National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD 20892, USA.
SO Medical Mycology, (1998) Vol. 36, No. Suppl. 1, pp. 57-67. 90 ref.
Meeting Info.: Proceedings of the XIV Congress of the International Society for Human and Animal Mycology, 8-13 June 1997, Parma, Italy.
DT Conference Article; Journal
LA English

L12 ANSWER 31 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 15
AN 1999:213770 BIOSIS
DN PREV199900213770
TI Penicilliosis marneffei and **pythiosis**: Emerging tropical

diseases.
AU Kaufman, Leo (1)
CS (1) Division of Bacterial and Mycotic Diseases, Centers for Disease Control and Prevention, G-11, Atlanta, GA, 30333 USA
SO Mycopathologia, (1998) Vol. 143, No. 1, pp. 3-7.
ISSN: 0301-486X.
DT Article
LA English
AB Penicilliosis marneffei and **pythiosis** insidiosi are emerging infections in subtropical, tropical, and temperate areas of the world. Penicilliosis marneffei is endemic in several Southeast Asian countries and may be carried to other areas of the world by residents of these countries or visitors. **Pythiosis** occurs in humans and animals who frequent the aquatic habitats that harbor Pythium insidiosum. Although early diagnosis is important because of the high morbidity or mortality associated with these two diseases, the diagnosis of these infections can be difficult because their clinical and histologic features are not pathognomonic. Prompt diagnosis is a prerequisite to their appropriate **treatment**. Laboratory testing, involving cultural, histologic and immunologic methods, is necessary to establish an unequivocal diagnosis. The clinical presentation, epidemiology, diagnosis and **treatment** of these diseases are discussed.

L12 ANSWER 32 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 16
AN 1997:447248 BIOSIS
DN PREV199799746451
TI Adjunctive use of a neodymium:yttrium-aluminum-garnet laser for **treatment** of **pythiosis** granulomas in two horses.
AU Sedrish, Steven A. (1); Moore, Rustin M. (1); Valdes-Vasquez, Miquel A.; Haynes, Peter F. (1); Vicek, Tom
CS (1) Dep. Veterinary Clinical Sci., Sch. Veterinary Med., Louisiana State Univ., Baton Rouge, La 70803 USA
SO Journal of the American Veterinary Medical Association, (1997) Vol. 211, No. 4, pp. 464-465.
ISSN: 0003-1488.
DT (CASE STUDY)
LA English

L12 ANSWER 33 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 17
AN 1997:112082 BIOSIS
DN PREV199799411285
TI Infections caused by the oomycetous pathogen Pythium insidiosum.
AU Mendoza, L. (1); Ajello, L.; McGinnis, M. R.
CS (1) Coll. Natural Sci., Med. Technol. Program, Michigan State Univ., 322 N. Kedzie Lab., East Lansing, MI 48824-1031 USA
SO Journal de Mycologie Medicale, (1996) Vol. 6, No. 4, pp. 151-164.
ISSN: 1156-5233.
DT General Review
LA English
SL English; French
AB **Pythiosis** insidiosi is a disease of animals and humans in the tropical, subtropical and temperate areas of the world. It is caused by Pythium insidiosum an organism in the Kingdom Chromista, Phylum Pseudofungi, Class Oomycetes, Family Pythiaceae. The first observations of this disease took place during the last century in equines afflicted with cutaneous granulomas. Pythium insidiosum was first isolated by Haan and Hoogkamer, but they failed to identify it as their cultures were sterile. Several years later Bridges and Emmons isolated a similar organism from equine granulomas in Texas. They proposed the term Hyphomyces destruens, an illegitimate designation based on the disease name "hyphomycosis destruens equi" coined by early workers. Austwick and Copland in 1974

the subcutaneous form. Surgical removal of the source of infection is the method of therapy of vascular and ophthalmic forms.

L12 ANSWER 36 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AN 95:45318 AGRICOLA
DN IND20470361
TI Cutaneous **pythiosis** in the horse.
AU Chaffin, M.K.; Schumacher, J.; McMullin, W.C.
CS Texas A&M University, College Station, TX.
AV DNAL (SF951.V47)
SO The Veterinary clinics of North America. Equine practice, Apr 1995. Vol. 11, No. 1. p. 91-103
Publisher: Philadelphia, Pa. : W.B. Saunders.
ISSN: 0749-0739
NTE In the series analytic: Dermatology / edited by Valerie A. Fadok.
Includes references
CY Pennsylvania; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 37 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 95:109650 CABA
DN 951201285
TI Fungal diseases
AU Foil, C. S.
CS Department of Veterinary Clinical Sciences, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA 70803, USA.
SO Clinics in Dermatology, (1994) Vol. 12, No. 4, pp. 529-542. 40 ref.
ISSN: 0738-081X
DT Journal
LA English
AB The clinical features, diagnosis, differential diagnosis and **treatment** of mycoses affecting the skin in cats and dogs are reviewed, including superficial infections with dermatophytes and Malassezia furfur, subcutaneous mycoses due to Sporothrix schenckii and Pythium sp., and systemic mycoses due to Cryptococcus neoformans and Blastomyces dermatitidis. Antifungal therapy with amphotericin B, griseofulvin, ketoconazole, itraconazole and fluconazole is also discussed.

L12 ANSWER 38 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 18
AN 1994:437722 BIOSIS
DN PREV199497450722
TI Phylogenetic spectrum of fungi that are pathogenic to humans.
AU Kwon-Chung, K. J.
CS LCI/NIAID, Build. 10, 11C 304 NIH, Bethesda, MD 20892 USA
SO Clinical Infectious Diseases, (1994) Vol. 19, No. SUPPL. 1, pp. S1-S7.
ISSN: 1058-4838.
DT General Review
LA English
AB Recent phylogenetic studies based on ribosomal RNA sequences have confirmed that the organisms traditionally **treated** as fungi include those that have evolved from several different lines (multiphyletic organisms), as has been suspected. Even organisms causing disease in humans represent at least two evolutional lines. Pythium insidiosum and Prototheca species are both believed to have evolved from one line, while the rest of the pathogens have evolved from another line. P. insidiosum is more closely related to red algae and diatoms than to

fungi. Prototheca species, as has been previously postulated, are closer to blue-green algae and plants than to fungi. **Pythiosis** and protothecosis, however, will still be dealt with by medical mycologists because of the morphological and in vivo staining characteristics of the causative organisms. Molecular genetic studies have revealed that Pneumocystis carinii can best be categorized as a fungus, although questions regarding its fungal status may remain unanswered until additional information becomes available on its life cycle, nuclear division, cell-wall chemistry, nutritional uptake pattern, and lysine biosynthetic pathway as well as the ultrastructural characteristics of its cellular components such as the Golgi complex. The phylogeny of the agents of lobomycosis and rhinosporidiosis, although they are **treated** as fungi, remains unknown. Although there is no in vitro culture system for Loboa loboi and Rhinosporidium seeberi at present, a molecular approach would allow us to reveal their phylogenetic relationship, and we can hope that such attempts are forthcoming.

L12 ANSWER 39 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 93:133065 CABA
DN 931251558
TI Human subcutaneous **pythiosis**
AU Triscott, J. A.; Weedon, D.; Cabana, E.
CS Department of Anatomical Pathology, Royal Brisbane Hospital, Brisbane 4029, Australia.
SO Journal of Cutaneous Pathology, (1993) Vol. 20, No. 3, pp. 267-271. 13 ref.
ISSN: 0303-6987
DT Journal
LA English
AB Two cases are reported in 14- and 11-yr-old immunocompetent boys who both presented with a growth mimicking a tumour in the periorbital region. Both patients had a history of exposure to either swampy water or horses. Computed tomography showed lateral displacement of the globe by the mass in 1 patient. Histological examination of hard, greyish tissue removed at biopsy in both cases demonstrated well-defined granular eosinophilic islands bordered by macrophages, multinucleate giant cells, fibrosis and numerous eosinophils, resembling the tissue reaction seen in equine **pythiosis**. Hyphae were demonstrated with Grocott stain and confirmed as Pythium by an immunoperoxidase technique using a polyclonal antiserum. Both patients recovered after **treatment** with amphotericin B (0.5 mg/kg daily), 5-fluorocytosine [flucytosine] (150 mg/kg daily) and hydrocortisone for 5 or 6 wk.

L12 ANSWER 40 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 19
AN 1993:28524 BIOSIS
DN PREV199395016724
TI Immunoblot analysis of the humoral immune response to Pythium insidiosum in horses with **pythiosis**.
AU Mendoza, Leonel (1); Nicholson, Vivian; Prescott, John F.
CS (1) Dep. Microbiology, University Texas Austin, Austin, Tex. 78712-1095
SO Journal of Clinical Microbiology, (1992) Vol. 30, No. 11, pp. 2980-2983.
ISSN: 0095-1137.
DT Article
LA English
AB Reactions to Pythgium insidiosum by sera from horses with active **pythiosis** were investigated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) and immunoblotting. Five strains of P. insidiosum were grown in nutrient broth and then sonicated. After centrifugation, supernatant antigens were separated by SDS-PAGE. An exoantigen of Conidiobolus coronatus was also tested. Bands with molecular weights between 97,000 and 14,000 were identified by Coomassie blue and silver staining. After being transferred to nitrocellulose, the antigens

pythiosis patients, no precipitin band was found. B. ranaraum CFA was also **treated** with each rabbit antiserum specific to Candida albicans, Malassezia furfur and Aspergillus fumigatus. No precipitin bands occurred with any of these antisera. Thus, this test was found to be practical, sensitive and specific, and cans be used to monitor patients infected with Basidiobolus ranarum.

L12 ANSWER 43 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 21
AN 1992:505874 BIOSIS
DN BA94:124399
TI EVALUATION OF TWO **VACCINES** FOR THE **TREATMENT** OF **PYTHIOSIS** INSIDIOSI IN HORSES.
AU MENDOZA L; VILLALOBOS J; CALLEJA C E; SOLIS A
CS DEP. MICROBIOL., UNIV. TEX. AUSTIN, AUSTIN, TEX. 78712-1095, USA.
SO MYCOPATHOLOGIA, (1992) 119 (2), 89-95.
CODEN: MYCPAH. ISSN: 0301-486X.
FS BA; OLD
LA English
AB Two **vaccines** to **treat pythiosis** insidiosi in horses were evaluated in 71 Costa Rican horses between 1982 to 1988. One **vaccine** used a cell-mass (CMV) as antigen and the other a soluble concentrated antigen (SCAV). Both **vaccines** cured horses infected with Pythium insidiosum (p value .apprx. 14%). The age of lesions prior to **vaccination** was important in the response of the horses to immunotherapy. All horses with lesions 0.5 months or less in duration were curred regardless of the **vaccine** used. Horses with lesions two or more months old did not respond to either **vaccine**. The age of the horses did not have any influence on their response to the **vaccinations**. The CMV produced a prominent inflammatory reaction at the side of injection, while the SCAV gave a low inflammatory reaction. In addition, the CMV lost its effectiveness two to three weeks after its preparation. By contrast, the SCAV maintained its ability to cure horses even after 18 months. Immunotherapy using SCAV can thus be used as the **vaccine** of choice in early cases of equine cutaneous **pythiosis** insidiosi.

L12 ANSWER 44 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 92:7261 CABA
DN 922260468
TI Chronic eosinophilic enteritis attributed to Pythium sp. in a horse
AU Morton, L. D.; Morton, D. G.; Baker, G. J.; Gelberg, H. B.
CS H.B. Gelberg, Department of Pathobiology, University of Illinois, 2001 S. Lincoln, Urbana, IL 61801, USA.
SO Veterinary Pathology, (1991) Vol. 28, No. 6, pp. 542-544. 9 ref.
ISSN: 0300-9858
DT Journal
LA English
AB Pythium sp. was identified by immunohistochemistry in lesions of chronic eosinophilic enteritis in a 7-year-old Arabian gelding with a 36-h history of colic which failed to respond to **treatment** at the Veterinary Teaching Hospital, Illinois, USA. The presence of plant material in the lesions suggested that the infection may have originated from a penetrating intestinal wound. Cutaneous **pythiosis** was subsequently diagnosed in another horse in Illinois. It is suggested that cutaneous or visceral eosinophilic nodules should be examined for Pythium sp or a zygomycete agent if no other cause is diagnosed.

L12 ANSWER 45 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN DUPLICATE 22
AN 92:25530 AGRICOLA

DN IND92008805
TI Apparent successful surgical **treatment** of intestinal **pythiosis** with vascular invasion in a dog.
AU Cooper R.C. Jr; Allison, N.; Boring, J.G.
CS Mississippi State University, Mississippi State, MS
AV DNAL (SF991.A1C3)
SO Canine practice, May/June 1991. Vol. 16, No. 3. p. 9-12
Publisher: Santa Barbara, Calif. : Veterinary Practice Publishing Co.
ISSN: 1057-6622
NTE Includes references.
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 46 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1991:327361 BIOSIS
DN BR41:23911
TI APPARENT SUCCESSFUL SURGICAL **TREATMENT** OF INTESTINAL **PYTHIOSIS** WITH VASCULAR INVASION IN A DOG.
AU COOPER R C JR; ALLISON N; BORING J G
CS COLL. VET. MED., MISS. STATE UNIV., MISSISSIPPI STATE, MISS. 39762.
SO Canine Pract. (1990, (1991) 16 (3), 9-12.
CODEN: CPRAEE.
FS BR; OLD
LA English

L12 ANSWER 47 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 90:104986 CABA
DN 901206955
TI **Pythiosis**
AU Campbell, C. K.
CS Mycological Reference Laboratory, PHLS Central Public Health Laboratory, London NW9 5HT, UK.
SO Equine Veterinary Journal, (1990) Vol. 22, No. 4, pp. 227-228. 20 ref.
ISSN: 0425-1644
DT Editorial
LA English
AB The history of Pythium insidiosum infections in horses is outlined and its differential diagnosis and **treatment** are discussed.

L12 ANSWER 48 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AN 90:21717 AGRICOLA
DN IND90008265
TI Enteric **pythiosis** in a horse.
AU Allison, N.; Gillis, J.P.
CS Virginia Department of Agriculture and Consumer Services, Richmond, VA
AV DNAL (41.8 AM3)
SO Journal of the American Veterinary Medical Association, Feb 1, 1990. Vol. 196, No. 3. p. 462-464 ill
Publisher: Schaumburg, Ill. : The Association.
CODEN: JAVMA4; ISSN: 0003-1488
NTE Includes references.
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 49 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 23
AN 1990:415869 BIOSIS
DN BA90:76670

TI AIDS AND TROPICAL DISEASES MELIOIDOSIS **PYTHIOSIS** AND PENICILLIOSIS.
AU TANPHAICHITRA D
CS MAHIDOL UNIV., P.O. BOX 4-217, BANGKOK 10400 THAILAND.
SO ARCH AIDS RES, (1990) 4 (1-2), 77-92.
CODEN: AARSE9.
FS BA; OLD
LA English
AB Patients with defective T-cell functions are more susceptible to intracellular and related tropical infections. Pseudomonas pseudomallei (melioidosis agent) and Penicillium marneffei are two common intracellular infections in the tropics. This study deals with AIDS patients infected with recurdescent melioidosis and with penicilliosis. Since Ps. pseudomallei produces a characteristic antigen, we modified the GalE Salmonella typhi Ty21a oral **vaccine** strain, as to be protective against melioidosis, in a conjugal DNA transfer experiment. Patients **treated** with four doses of this bivalent **vaccine** strain developed antibody against Ps. pseudomallei up to 70%. Four thalassemic patients with or without hemoglobinopathy infected with Pythium insidiosum, an aquatic Phycomycetes, and one patient with corneal **pythiosis** are described. Cellular immunity testing in AIDS patients with recrudescent melioidosis, with penicilliosis and patients with **pythiosis** revealed abnormal values.

L12 ANSWER 50 OF 60 MEDLINE on STN
AN 90100287 MEDLINE
DN 90100287 PubMed ID: 2602781
TI Tropical disease in the immunocompromised host: melioidosis and **pythiosis**.
AU Tanphaichitra D
CS Infectious Disease and Host Defense Unit, Mahidol University, Bangkok, Thailand.
SO REVIEWS OF INFECTIOUS DISEASES, (1989 Nov-Dec) 11 Suppl 7 S1629-43.
Journal code: 7905878. ISSN: 0162-0886.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199002
ED Entered STN: 19900328
Last Updated on STN: 19900328
Entered Medline: 19900202
AB Melioidosis is an infection of humans and animals caused by a gram-negative motile bacillus, Pseudomonas pseudomallei. Forty-nine patients with melioidosis complicating diabetes mellitus, collagen vascular disorders, leukemia/lymphoma, and other hematologic malignancies are described. Twenty-nine of these patients had disseminated/septicemic infection, two developed toxic shock syndrome, and one with AIDS experienced recrudescent melioidosis. Patients with disseminated melioidosis often have a variety of defects in cellular immunity both in vitro and in vivo. In humans with recrudescent melioidosis, cellular immunity can be transferred by a transfer factor and by levamisole, a cellular immunopotentiating agent. The results of the **treatment** of our patients with disseminated/septicemic melioidosis with antimicrobial agents in combination have been successful. In recent years, four cases of fungal arteritis due to Pythium species and one case of keratitis due to Pythium were seen. Almost all patients with fungal arteritis had thalassemia; all presented with pain in the lower extremities and gangrenous lesions of the toes. Pythium species, an aquatic Phycomycetes, was identified in these cases as a human pathogen on the basis of clinical features, pathologic findings, and--of greatest importance--the isolation of the etiologic fungi. These five cases with remarkably similar presentations exhibited certain similarities with and

differences from cases of mucormycosis, entomophthoromycosis, and peniciliosis.

L12 ANSWER 51 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 24
AN 1989:269746 BIOSIS
DN BA88:5828
TI HUMAN **PYTHIOSIS** ASSOCIATED WITH THALASSEMIA HEMOGLOBINOPATHY SYNDROME.
AU SATHAPATAYAVONGS B; LEELACHAIKUL P; PRACHAKTAM R; ATICHARTAKARN V; SRIPHOJANART S; TRAIRATVORAKUL P; JIRASIRITHAM S; NANONTASUT S; EURVILAICHIT C; FLEGEL T
CS DEP. MED., RAMATHIBODI HOSP., RAMA VI ROAD, BANGKOK 10400, THAILAND.
SO J INFECT DIS, (1989) 159 (2), 274-280.
CODEN: JIDIAQ. ISSN: 0022-1899.
FS BA; OLD
LA English
AB Pythium infection (**pythiosis**) in humans has not previously been described, even in areas endemic for animal **pythiosis**. We report five patients with a unique presentation of fungal arteritis. The medium- to large-sized arteries were involved, and in some cases this involvement led to gangrene of the limbs, aneurysm formation, and ultimately fatal arterial leakage. All five patients were farmers. All patients, with the possible exception of one who had hemoglobin typing performed after receiving a blood transfusion, had thalassemia hemoglobinopathy syndrome. Fungal isolation was difficult. Amphotericin B **treatment** seemed to be ineffective. Radical surgical removal of infected tissues and oral administration of a saturated solution of potassium iodide are proposed therapy. In the tropics, where Pythium is ubiquitous, one should actively look for this fungal infection in patients with unexplained arterial occlusion, especially in the case of patients with thalassemia hemoglobinopathy syndrome.

L12 ANSWER 52 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 25
AN 1989:286852 BIOSIS
DN BA88:12196
TI **ANTIGENIC** RELATIONSHIP BETWEEN PYTHIUM-INSIDIOSUM DE COCK ET AL. 1987 AND ITS SYNONYM PYTHIUM-DESTRUENS SHIPTON 1987.
AU MENDOZA L; MARIN G
CS ONTARIO VET. COLL. MICROBIOL. IMMUNOL., UNIV. GUELPH, GUELPH, ONTARIO N1G 2W1, CANADA.
SO MYCOSES, (1989) 32 (2), 73-77.
CODEN: MYCSEU.
FS BA; OLD
LA English
AB Antigens and rabbit-antisera from holotypes of Pythium insidiosum and P. destruens were prepared to elucidate their **antigenic** relationship. The antigens and rabbit-antisera of P. insidiosum as well as P. destruens used as a reference system showed that both shared three precipitin bands in common. The antigen and rabbit-antisera of P. destruens and P. insidiosum used as a reference system against other strains isolated from humans and animals with **pythiosis**, also showed three precipitin bands in common. When we used sera taken from horses with proven **pythiosis** against antigens of P. insidiosum and P. destruens, six common bands were observed. We concluded that the etiologic agent of **pythiosis** is a single species P. insidiosum, and could be identified by serologic methods.

L12 ANSWER 53 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 90:105084 CABA
DN 901207053
TI Tropical disease in the immunocompromised host: melioidosis and

pythiosis
AU Tanphaichitra, D.
CS Infectious Disease and Host Defense Unit, Mahidol University, Bangkok 10400, Thailand.
SO Reviews of Infectious Diseases, (1989) Vol. 11, No. Suppl. 7, pp. S1629-S1643. 46 ref.
DT Conference Article; Journal
LA English
AB Cases of melioidosis and **pythiosis** seen at hospitals in Bangkok are reviewed. Forty-nine patients with melioidosis caused, by a Gram negative motile bacillus Pseudomonas pseudomallei, complicating diabetes mellitus, collagen vascular disorders, leukaemia/lymphoma and other haematological malignancies are described. Twenty-nine of these patients had disseminated/septicaemic infection, 2 developed toxic shock syndrome and one with AIDS experienced recrudescent melioidosis. The results of the **treatment** of these patients with disseminated/septicaemic melioidosis with antimicrobial agents in combination were successful. Four cases of fungal arteritis due to Pythium spp. (2 identified as P. insidiosum) and one case of keratitis due to P. insidiosum were also seen. Almost all patients with fungal arteritis had thalassaemia; all presented with pain in the lower extremities and gangrenous lesions of the toes. Pythium spp. were identified in these cases as human pathogens on the basis of clinical features, pathological findings and the isolation of the aetiological agents. Four case reports are given.

L12 ANSWER 54 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 26
AN 1988:29444 BIOSIS
DN BA85:17169
TI **ANTIGENIC** RELATIONSHIP BETWEEN THE ANIMAL AND HUMAN PATHOGEN PYTHIUM-INSIDIOSUM AND NONPATHOGENIC PYTHIUM SPECIES.
AU MENDOZA L; KAUFMAN L; STANDARD P
CS DIV. MYCOTIC DISEASES, CENTER FOR INFECTIOUS DISEASES, CENTERS DISEASE CONTROL, ATLANTA, GEORGIA 30333.
SO J CLIN MICROBIOL, (1987) 25 (11), 2159-2162.
CODEN: JCMIDW. ISSN: 0095-1137.
FS BA; OLD
LA English
AB Identification of the newly named pathogenic oomycete Pythium insidiosum and its differentiation from other Pythium species by morphologic criteria alone can be difficult and time-consuming. **Antigenic** analysis by fluorescent-antibody and immunodiffusion precipitin techniques demonstrated that the P. insidiosum isolates that cause **pythiosis** in dogs, horses, and humans are identical and that they were distinguishable from other Pythium species by these means. The immunologic data agreed with the morphologic data. This indicated that the animal and human isolates belonged to a single species, P. insidiosum. Fluorescent-antibody and immunodiffusion reagents were developed for the specific identification of P. insidiosum.

L12 ANSWER 55 OF 60 CABA COPYRIGHT 2003 CABI on STN
AN 89:69631 CABA
DN 891203176
TI **Pythiosis**: a review
Pitiosis: una revision
AU Mendoza, L.
CS Escuela de Medicina Veterinaria, Universidad Nacional, PO Box 86, Heredia, Costa Rica.
SO Revista Iberica de Micologia, (1987) Vol. 4, No. 2, pp. 159-175. 64 ref.
DT Journal
LA Spanish
SL English
AB The important clinical indications, histopathology, distribution,

aetiology, epidemiology, serology, mycology, **treatment** and differential diagnosis of **pythiosis**, due to Pythium insidiosum, in horses, dogs and cattle are reviewed.

L12 ANSWER 56 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 27
AN 1986:281147 BIOSIS
DN BA82:25010
TI IMMUNODIFFUSION TEST FOR DIAGNOSING AND MONITORING **PYTHIOSIS** IN HORSES.
AU MENDOZA L; KAUFMAN L; STANDARD P G
CS DIV. MYCOTIC DIS., CENT. INFECT. DIS., CENT. DIS. CONTROL., ATLANTA, GA. 30333, USA.
SO J CLIN MICROBIOL, (1986) 23 (5), 813-816.
CODEN: JCMIDW. ISSN: 0095-1137.
FS BA; OLD
LA English
AB A practical, sensitive, and specific immunodiffusion test was developed for diagnosing and monitoring **pythiosis** in horses. Culture filtrates, a soluble cell mass, and trypsinized Pythium sp. antigens were evaluated against prepared rabbit anti-Pythium sp. serum and **pythiosis** horse case sera. The culture filtrate antigens demonstrated the greatest capacity for detecting precipitins and the greatest stability during storage. In contrast, the trypsinized antigens had the weakest capability for detecting multiple precipitins and the poorest stability. The 13 sera from horses with proven active **pythiosis** were positive in immunodiffusion tests with the culture filtrate antigens. Each serum contained from three to six precipitins. **Treated** horses lost precipitins, and some became antibody negative. No false-positive reactions were noted in tests with sera from normal horses and humans or with sera from a variety of heterologous horse and human infections.

L12 ANSWER 57 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN DUPLICATE 28
AN 86:76010 AGRICOLA
DN IND86055450
TI Equine **pythiosis** in Costa Rica: report of 39 cases.
AU Mendoza, L.; Alfaro, A.A.
AV DNAL (450 M994)
SO Mycopathologia, May 1986. Vol. 94, No. 2. p. 123-129 ill
Publisher: Dordrecht : Martinus Nijhoff/W. Junk Publishers.
CODEN: MYCPAH; ISSN: 0301-486X
NTE Includes 31 references.
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L12 ANSWER 58 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN DUPLICATE 29
AN 87:45635 AGRICOLA
DN IND87025014
TI A report of subcutaneous **pythiosis** in five dogs and a review of the etiologic agent Pythium spp.
AU Foil, C.S.O.; Short, B.G.; Fadok, V.A.; Kunkle, G.A.
AV DNAL (SF601.A5)
SO The Journal of the American Animal Hospital Association, Nov/Dec 1984. Vol. 20, No. 6. p. 959-966 ill
Publisher: Mishawaka, Ind. : The Association.

CODEN: JAAHBL; ISSN: 0587-2871
NTE Literature review.
Includes references.
DT Article; (SURVEY OF LITURATURE)
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 59 OF 60 MEDLINE on STN DUPLICATE 30
AN 83238052 MEDLINE
DN 83238052 PubMed ID: 6863139
TI Complications associated with immunotherapy of equine phycomycosis.
AU Miller R I; Wold D; Lindsay W A; Beadle R E; McClure J J; McClure J R; McCoy D J
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (1983 Jun 1) 182 (11) 1227-9.
Journal code: 7503067. ISSN: 0003-1488.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198308
ED Entered STN: 19900319
Last Updated on STN: 19990129
Entered Medline: 19830817
AB Five horses with **pythiosis** of the limbs were **treated** unsuccessfully by surgery or topical application of amphotericin B, or both. Follow-up immunotherapy resulted in 1 horse responding favorably. Three horses were cured of the fungal infection but developed osteitis or deep-seated laminitis, which necessitated their destruction. The remaining horse, which had severe anemia, died before the course of **vaccination** was completed.

L12 ANSWER 60 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 31
AN 1984:283858 BIOSIS
DN BA78:20338
TI EXPERIMENTAL **PYTHIOSIS** IN RABBITS.
AU MILLER R I; CAMPBELL R S F
CS DEP. OF VETERINARY PATHOL., SCH. OF VETERINARY MED., LOUISIANA STATE UNIV., BATON ROUGE, LOUISANA 7083, U.S.A.
SO SABOURAUDIA, (1983 (RECD 1984)) 21 (4), 331-342.
CODEN: SABOA9. ISSN: 0036-2174.
FS BA; OLD
LA English
AB Rabbits were injected s.c., i.p. and i.v. with suspensions of motile zoospores of a Pythium sp. isolated from a s.c. lesion of a horse in north Queensland [Australia]. Some animals injected s.c. were also **treated** by cortisone injections. Animals in each group were highly susceptible to infection. Injection s.c. resulted in progressive granulomatous eosinophilic abscesses in all normal and cortisone-**treated** animals. Preferential hepatic invasion developing into severe necrotizing hepatitis was the most common lesion in the i.p. injected group. In i.v. injected animals severe embolic mycotic nephritis was the principal lesion. A significant progressive leukocytosis with moderate neutrophilia and mild monocytosis was observed in the s.c. and i.p. injected immune competent animals. Cortisone-**treated** s.c. injected animals did not develop a leukocytosis. Many of the cortisone-**treated** control animals showed increased susceptibility to bacterial infections; the cortisone-**treated** fungal-injected animals did not.

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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CA SUBSCRIBER PRICE	0.00	-0.65

FILE 'STNGUIDE' ENTERED AT 11:49:55 ON 04 AUG 2003

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Aug 1, 2003 (20030801/UP).

PI US 5948413 Sep. 07, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 7, 1999) Vol. 1226, No. 1, pp. NO PAGINATION. ISSN: 0098-1133.
DT Patent
LA English

=> s pythiosis
L6 321 PYTHIOSIS

=> s l6 and antigen?
L7 69 L6 AND ANTIGEN?

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8 26 DUP REM L7 (43 DUPLICATES REMOVED)

=> d bib ab 1-26

L8 ANSWER 1 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 1
AN 2003:281470 BIOSIS
DN PREV200300281470
TI Three types of immunotherapics against **pythiosis** insidiosi developed and evaluated.
AU Santurio, J. M. (1); Leal, A. T.; Leal, A. B. M.; Festugatto, R.; Lubeck, I.; Sallis, E. S. V.; Copetti, M. V.; Alves, S. H.; Ferreiro, L.
CS (1) Laboratorio de Pesquisas Micologicas, Universidade Federal de Santa Maria, 97105-900, Santa Maria, RS, Brazil: santurio@smail.ufsm.br Brazil
SO Vaccine, (2 June 2003) Vol. 21, No. 19-20, pp. 2535-2540. print. ISSN: 0264-410X.
DT Article
LA English
AB **Pythiosis** is a granulomatous disease of horses, cattle, dogs, cats and humans identified in tropical and subtropical areâs and caused by Pythium insidiosum, a zoosporic fungus. Experimental models of **pythiosis** in naturally infected species have not yet been reported but, rabbits maybe inoculated with zoospores as an experimental model for studying the disease. The present study evaluates the efficacy of three different of immunotherapics in the rabbit model. Approximately 17,500 zoospores of oomycete P. insidiosum (CBS 101555 strain) were inoculated in each animal to generate the disease. Immunotherapics were produced from vortexed or sonicated cultures of the same strain. Four groups of five animals were employed: group 1, placebo; group 2, sonicated immunotherapic; group 3, mixed immunotherapic; and group 4, vortexed immunotherapic. All rabbits were inoculated with viable zoospores one month before administration of the immunotherapics. Eight doses of immunotherapic or placebo were used in each animal with a 14 day interval between injections. Rabbits receiving the vortexed immunotherapic were most effectively protected ($P < 0.05$), showing a decrease in the area of coastal nodules due to **Pythiosis** insidiosum by 71.8% after 26 weeks of evaluation. Moreover, two animals in this group showed complete remission of the infection at the end of the 26 weeks. In contrast to these findings, rabbits given the sonicated immunotherapic did not show any protection and had an increase of 211.8% in the size of lesions. This failure of sonicated immunotherapic may reflect denaturation of protective **antigens** due to the sonication method.

L8 ANSWER 2 OF 26 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN DUPLICATE 2
AN 2002-626529 [67] WPIDS
CR 1999-526385 [44]; 2002-054339 [07]
DNC C2002-176584

of **pythiosis**, the present vaccine, is able to cure patients who are in chronic stage of the disease.
Dwg.0/2

L8 ANSWER 3 OF 26 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:262085 BIOSIS
DN PREV200300262085
TI Immunotherapy for fungal infections.
AU Casadevall, Arturo (1)
CS (1) Department of Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, NY, USA USA
SO Jacobson, Jeffrey M. [Editor]. (2002) pp. 303-322. Infectious Disease. Immunotherapy for infectious diseases. print.
Publisher: Humana Press Inc. 999 Riverview Drive, Suite 208, Totowa, NJ, 07512, USA.
ISBN: 0-89603-669-3 (cloth).
DT Book
LA English

L8 ANSWER 4 OF 26 CABA COPYRIGHT 2003 CABI on STN
AN 2003:7682 CABA
DN 20023170468
TI Serological response in rabbits immunized with Pythium insidiosum **antigens** associated with different adjuvants
Resposta sorologica de coelhos imunizados com **antigenos** de Pythium insidiosum associados a diferentes adjuvantes
AU Leal, A. T.; Santurio, J. M.; Leal, A. B. M.; Pinto, A. M.; Griebeler, J.; Flores, E. F.; Ferreiro, L.; Catto, J. B.
CS Laboratorio de Pesquisas Micologicas (LAPEMI), Departamento de Microbiologia e Parasitologia, Universidade Federal de Santa Maria (UFSM), Santa Maria, RS, Brazil.
SO Ciencia Rural, (2002) Vol. 32, No. 6, pp. 1027-1032. 23 ref.
Publisher: Centro de Ciencias Rurais, Universidade Federal de Santa Maria. Santa Maria
ISSN: 0103-8478
CY Brazil
DT Journal
LA Portuguese
SL English
AB Pythium insidiosum is a zoosporic fungi living in flooded areas which can infect humans and animals. Natural infection in these species results in clinical **pythiosis**, a granulomatous disease of difficult treatment. Immunotherapy with **antigens** obtained from cultures of the agent is a promising alternative therapy. In order to evaluate the effect of adjuvants in the immunologic response to P. insidiosum **antigens**, 24 rabbits were assigned to four groups and immunized with mycelian mass **antigen** with each of there adjuvants. Group I: aluminium hydroxide; group II: Freund's adjuvant; group III: mineral oil and group IV: distilled water-control. The effects of the adjuvants were evaluated by measuring the levels of anti-pythium immunoglobulin G (IgG) produced by the immunized rabbits at different time-points after immunization, using an ELISA test. During phase 1, the animals were immunized three times (days zero, 14 and 28) and serologically tested at days 14, 21, 28 and 35. The oil adjuvants (groups II and III) were statistically superior to groups I and IV. During phase 2 (from day 42 to 120) each group was subdivided in two, with one subgroup having additional immunizations at days 42, 56, 68 and 82 and the other having the treatment interrupted. Among the rabbits with continued immunizations, groups I, II and III (adjuvants) had statistically higher IgG levels than GIV. Among rabbits with interrupted treatment, GI, GII and presented stable IgG levels and were statistically superior to the control group, that presented decrease in the levels. These results demonstrated that the adjuvants were capable of inducing stronger and longer immunologic

L6 321 S PYTHIOSIS
L7 69 S L6 AND ANTIGEN?
L8 26 DUP REM L7 (43 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 11:32:09 ON 04 AUG 2003

FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS, LIFESCI, CAPLUS' ENTERED AT 11:41:14 ON 04 AUG 2003

=> s l6 and vaccin?
L9 41 L6 AND VACCIN?

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10 18 DUP REM L9 (23 DUPLICATES REMOVED)

=> d bib ab 1-18

L10 ANSWER 1 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 1
AN 2003:324097 BIOSIS
DN PREV200300324097
TI An improved Pythium insidiosum-**vaccine** formulation with enhanced immunotherapeutic properties in horses and dogs with **pythiosis**.
AU Mendoza, Leonel (1); Mandy, William; Glass, Robert
CS (1) Medical Technology Program, Department of Microbiology and Molecular Genetics, Michigan State University, 322 N. Kedzie Laboratory, East Lansing, MI, 48824-1031, USA: mendoza9@msu.edu USA
SO Vaccine, (20 June 2003) Vol. 21, No. 21-22, pp. 2797-2804. print.
ISSN: 0264-410X.
DT Article
LA English
AB The immunotherapeutic properties of a new Pythium insidiosum-**vaccine** formulation (PIV), was evaluated in 18 horses and 6 dogs with proven **pythiosis** from different enzootic areas in the United States. All injected horses but one responded with a weak (= 29 mm, n = 3), a mild (30-90 mm, n = 7) or a strong (= 100 mm, n = 7) inflammatory reactions at the site of injection. Three equines with weak or negative reactions at the injection site were not cured. Seven equines with strong reactions at their injection sites, however, were cured. Six of the eight horses with mild reactions were also cured. The remaining two equines responded at first but both relapsed and finally died of their infections. The PIV cured only two of the six dogs used in this study. The new PIV formulation cured 72% of the equines (P = 0.048) and 33% of the dogs with **pythiosis**. Dogs with chronic disease (greater than two months) did not responded to immunotherapy. The finding of eosinophils, mast cells, IgE and precipitin IgG during **pythiosis** suggested that a T helper 2 (Th2) subset is in place during this disease. In cured horses, the eosinophilic reaction was substituted by lymphocytes and mononuclear macrophages (Th1). This and previous studies strongly support the hypothesis that an immune-modulation from a Th2 to a Th1 subsets may be in part responsible for the PIV's curative properties.

L10 ANSWER 2 OF 18 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN DUPLICATE 2
AN 2003194084 EMBASE
TI Three types of immunotherapics against **pythiosis** insidiosi developed and evaluated.
AU Santurio J.M.; Leal A.T.; Leal A.B.M.; Festugatto R.; Lubeck I.; Sallis E.S.V.; Copetti M.V.; Alves S.H.; Ferreiro L.
CS J.M. Santurio, Lab. de Pesquisas Micologicas, Universidade Federal de Santa Maria, 97105-900 Santa Maria, RS, Brazil. santurio@smail.ufsm.br
SO Vaccine, (2 Jun 2003) 21/19-20 (2535-2540).

Refs: 20
ISSN: 0264-410X CODEN: VACCDE
CY United Kingdom
DT Journal; Article
FS 004 Microbiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LA English
SL English
AB **Pythiosis** is a granulomatous disease of horses, cattle, dogs, cats and humans identified in tropical and subtropical areas and caused by Pythium insidiosum, a zoosporic fungus. Experimental models of **pythiosis** in naturally infected species have not yet been reported but, rabbits may be inoculated with zoospores as an experimental model for studying the disease. The present study evaluates the efficacy of three different of immunotherapics in the rabbit model. Approximately 17,500 zoospores of oomycete P. insidiosum (CBS 101555 strain) were inoculated in each animal to generate the disease. Immunotherapics were produced from vortexed or sonicated cultures of the same strain. Four groups of five animals were employed: group 1, placebo; group 2, sonicated immunotherapic; group 3, mixed immunotherapic; and group 4, vortexed immunotherapic. All rabbits were inoculated with viable zoospores one month before administration of the immunotherapics. Eight doses of immunotherapic or placebo were used in each animal with a 14 day interval between injections. Rabbits receiving the vortexed immunotherapic were most effectively protected ($P<0.05$), showing a decrease in the area of coastal nodules due to **Pythiosis** insidiosum by 71.8% after 26 weeks of evaluation. Moreover, two animals in this group showed complete remission of the infection at the end of the 26 weeks. In contrast to these findings, rabbits given the sonicated immunotherapic did not show any protection and had an increase of 211.8% in the size of lesions. This failure of sonicated immunotherapic may reflect denaturation of protective antigens due to the sonication method.

L10 ANSWER 3 OF 18 MEDLINE on STN DUPLICATE 3
AN 2003343110 IN-PROCESS
DN 22757379 PubMed ID: 12875449
TI Immunotherapy for treatment of multicentric cutaneous **pythiosis** in a dog.
AU Hensel Patrick; Greene Craig E; Medleau Linda; Latimer Kenneth S; Mendoza Leonel
CS Department of Small Animal Medicine, College of Veterinary Medicine, University of Georgia, Athens, GA 30602, USA.
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (2003 Jul 15) 223 (2) 215-8, 197.
Journal code: 7503067. ISSN: 0003-1488.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20030724
Last Updated on STN: 20030724
AB A 4-year-old Labrador Retriever was referred for evaluation of 2 ulcerative nodular cutaneous lesions. One lesion was located on the medial aspect of the right carpus; the other was located on the medial aspect of the left tarsus. The dog had spent its entire life in the southeastern part of the United States and approximately half of its time outdoors with free access to a nearby lake. Histologic examination of full-thickness wedge biopsy specimens from both lesions revealed severe, multifocal, puruloeosinophilic to pyogranulomatous deep dermatitis with intralesional filamentous structures, fibroplasia, and neovascularization. Examination of sections stained with Gomori methenamine silver stain

II: Freund's adjuvant; group III: mineral oil and group IV: distilled water-control. The effects of the adjuvants were evaluated by measuring the levels of anti-pythium immunoglobulin G (IgG) produced by the immunized rabbits at different time-points after immunization, using an ELISA test. During phase 1, the animals were immunized three times (days zero, 14 and 28) and serologically tested at days 14, 21, 28 and 35. The oil adjuvants (groups II and III) were statistically superior to groups I and IV. During phase 2 (from day 42 to 120) each group was subdivided in two, with one subgroup having additional immunizations at days 42, 56, 68 and 82 and the other having the treatment interrupted. Among the rabbits with continued immunizations, groups I, II and III (adjuvants) had statistically higher IgG levels than GIV. Among rabbits with interrupted treatment, GI, GII and presented stable IgG levels and were statistically superior to the control group, that presented decrease in the levels. These results demonstrated that the adjuvants were capable of inducing stronger and longer immunologic responses (IgG) to P. insidiosum antigens. Therefore, the use of adjuvants associated with P. insidiosum antigens may increase the recovery rates obtained through immunotherapy.

L10 ANSWER 7 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AN 2003:8733 AGRICOLA
DN IND23304640
TI Treatment of equine **pythiosis**.
AU Hubert, J.D.; Grooters, A.M.
AV DNAL (SF601.C66)
SO The Compendium on continuing education for the practicing veterinarian, Oct 2002. Vol. 24, No. 10. p. 812-815
Publisher: Trenton, N.J. : Veterinary Learning Systems.
ISSN: 0193-1903
NTE Includes references
CY New Jersey; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L10 ANSWER 8 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:597110 BIOSIS
DN PREV200200597110
TI Immunotherapy, an approach to treat the infections caused by Pythium insidiosum.
AU Mendoza, L. (1)
CS (1) Michigan State University, East Lansing, MI USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2002) Vol. 102, pp. 211. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 102nd General Meeting of the American Society for Microbiology Salt Lake City, UT, USA May 19-23, 2002 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English
AB Immunotherapy, using antigens from cultures of the human and animal pathogen Pythium insidiosum (PIV), showed that infected hosts with **pythiosis** reacted to injected immunogens by triggering an immune response that resulted in cure. Early observations on the therapeutic features of the PIV in equines with **pythiosis** indicated that the eosinophilic reaction, observed during natural infection, was always substituted by a mononuclear reaction after successful treatment. Since them, we have used the **vaccine** in apprx500 horses, 11 dogs and 9 humans. In equines, the efficacy of the PIV was around 70%, in humans of 9

commonly in patients with splenectomy and included septicemia, pneumonia, biliary tract infection, salmonellosis, and urinary tract infection. Responsible organisms were Escherichia coli (26%), Klebsiella pneumoniae (23%), Salmonella (15%), and Streptococcus pneumoniae (13%). Other organisms included Pseudomonas, Staphylococci, Burkholderia pseudomallei (melioidosis), and Aeromonas. Patients undergoing DFO therapy are at risk for Y. enterocolitica infection which may be localized to mesenteric nodes and tonsils or occur as a generalized form such as septicemia. Recently, we have seen a unique infection so-called vascular **pythiosis**. Patients usually presented with clinical features of vascular occlusion of lower limbs from ascending arteritis and thrombosis. The causative organism, Pythium insidiosum, is fungus-like, in the kingdom Stramenopila, and in the class Oomycetes. The mortality rate is high and the only effective treatment has been early amputation or possibly immunotherapy. The predisposing factors of infections in thalassemia include splenectomy, iron overload, anemia, and granulocyte dysfunctions. General management of infections in thalassemia consist of prevention, i.e., immunization with pneumococcal and hepatitis **vaccines**, oral penicillins especially in patients with splenectomy, removal of predisposing factors such as gallstones, iron overload, and appropriate antibiotics.

L10 ANSWER 11 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 7
AN 1999:521514 BIOSIS
DN PREV199900521514
TI Method and **vaccine** for treatment of **pythiosis** insidiosi in humans and lower animals.
AU Mendoza, Alberto L. (1)
CS (1) Haslett, MI USA
ASSIGNEE: Board of Trustees operating Michigan State University
PI US 5948413 Sep. 07, 1999
SO Official Gazette of the United States Patent and Trademark Office Patents, (Sep. 7, 1999) Vol. 1226, No. 1, pp. NO PAGINATION.
ISSN: 0098-1133.
DT Patent
LA English

L10 ANSWER 12 OF 18 CABA COPYRIGHT 2003 CABI on STN
AN 1998:183242 CABA
DN 981202946
TI Development of **vaccines** and their use in the prevention of fungal infections
AU Dixon, D. M.; Casadevall, A.; Klein, B.; Mendoza, L.; Travassos, L.; Deepe, G. S., Jr.; Polonelli, L. O. [EDITOR]; Walsh, T. J. [EDITOR]
CS National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD 20892, USA.
SO Medical Mycology, (1998) Vol. 36, No. Suppl. 1, pp. 57-67. 90 ref.
Meeting Info.: Proceedings of the XIV Congress of the International Society for Human and Animal Mycology, 8-13 June 1997, Parma, Italy.
DT Conference Article; Journal
LA English

L10 ANSWER 13 OF 18 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 97033677 EMBASE
DN 1997033677
TI Infections caused by the Oomycetous pathogen Pythium insidiosum.
AU Mendoza L.; Ajello L.; McGinnis M.R.
CS L. Mendoza, College of Natural Science, Medical Technology Program, Michigan State University, East Lansing, MI 48824-1031, United States
SO Journal de Mycologie Medicale, (1996) 6/4 (151-164).
Refs: 87
ISSN: 1156-5233 CODEN: JMYME5
CY France

successfully stimulated the production of zoospores that were similar to those produced by members of the genus Pythium, in a filamentous microorganism they had isolated from horses with swamp cancer in New Guinea. More recently, de Cock et al. proposed the name P. insidiosum to include all strains isolated from all cases of **pythiosis** insidiosi. The disease has been reported in such animals as: cats, cattle, dogs, horses, captive polar bears, and in humans. This review deals with **pythiosis** insidiosi most important aspects including the biology and life cycle of P. insidiosum, as well as the epidemiology, clinical signs, pathology, diagnosis (animal inoculation, mycology and serology), and **treatment** of this disease once known as an exotic illness of tropical countries.

L12 ANSWER 34 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AN 1999:10280 AGRICOLA
DN IND21963017
TI Update **pythiosis** (oomycosis).
AU Foil, C.S.
CS Louisiana State University, Baton Rouge, LA.
AV DNAL (SF605.N672)
SO Proceedings of the North American Veterinary Conference, 1996. Vol. 10 p. 140-142
Publisher: [Gainesville, Fla.] : Eastern States Veterinary Association, 1992-
NTE Meeting held Jan. 13-17, 1996, Orlando, Florida.
Includes references
CY Florida; United States
DT Article; Conference
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 35 OF 60 MEDLINE on STN
AN 1998164809 MEDLINE
DN 98164809 PubMed ID: 9504058
TI Human **pythiosis**.
AU Thianprasit M; Chaiprasert A; Imwidthaya P
CS Department of Dermatology, Siriraj Hospital, Mahidol University, Bangkok, Thailand.
SO CURRENT TOPICS IN MEDICAL MYCOLOGY, (1996 Dec) 7 (1) 43-54. Ref: 72
Journal code: 8510329. ISSN: 0177-4204.
CY Spain
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW OF REPORTED CASES)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199803
ED Entered STN: 19980407
Last Updated on STN: 19980407
Entered Medline: 19980326
AB **Pythiosis** is a cosmopolitan granulomatous disease caused by an aquatic fungus Pythium insidiosum which usually occurs in horses, cattle, dogs, cats or fishes. There have been 28 cases of human **pythiosis** published in the literature. Twenty three patients have been reported from all over Thailand. Human **pythiosis** presents in one of three clinical forms: cutaneous or subcutaneous, systemic or vascular and ophthalmic (e.g., corneal ulcer or keratitis). Systemic antibiotics or antimycotics are not effective in the **treatment** of this infection. A saturated solution of KI gives a beneficial result only in

were reacted against sera from six horses with **pythiosis**, sera from four horses cured a year earlier by **vaccination**, and sera from five healthy horses. The sera from horsses with **pythiosis** recognized at least 20 antigens in all strains. Three antigens with molecular weights of 32,000, 30,000, and 28,000 appeared to be immunodominant and specific. Sera from horses cured by immunotherapy showed only five very weak bands, three of them the 32,000-molecular-weight (32K), 30K, and 28K antigens. No bands were observed with sera from healthy horses or sera from horses with a variety of other infections. Sera from horses with **pythiosis** cross-reacted with the 44K antigen of C. coronatus. The immunodominant antigens described here may be useful for diagnostic purposes and in immunotherapy for this oomycotic infection in horses.

L12 ANSWER 41 OF 60 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) on STN
AN 94:15269 AGRICOLA
DN IND20373039
TI Multicentric cutaneous **pythiosis** in a foal.
AU Chaffin, M.K.; Schumacher, J.; Hooper, N.
AV DNAL (41.8 Am3)
SO Journal of the American Veterinary Medical Association, July 15, 1992. Vol. 201, No. 2. p. 310-312
Publisher: Schaumburg, Ill. : The Association.
CODEN: JAVMA4; ISSN: 0003-1488
NTE Includes references
CY Illinois; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L12 ANSWER 42 OF 60 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 20
AN 1992:456154 BIOSIS
DN BA94:97554
TI IMMUNODIFFUSION TEST FOR DIAGNOSING BASIDIOBOLOMYCOSIS.
AU IMWIDTHAYA P; SRIMUANG S
CS DEP. MICROBIOL., SIRIRAJ HOSP., MAHIDOL UNIV., BANGKOK 10700, THAILAND.
SO MYCOPATHOLOGIA, (1992) 118 (3), 127-131.
CODEN: MYCPAH. ISSN: 0301-486X.
FS BA; OLD
LA English
AB An immunodiffusion test was developed for the diagnosis of basidiobolomycosis. When culture filtrate antigen (CFA) from basidiobolus ranarum was reacted against two human patients and twos rabbit antisera, 2 precipitin bands, inner (N) and outer (Y), were revealed for both patient and rabbit antisera. A line of identity was also observed between precipitin bands obtained with patient and rabbit sera. When CFA from B. ranarum (B CFA) was reacted against rabbit sera which contained antibody to Conidiobolus coronatus and Phythium insidiosum, 1 precipitin band corresponding to inner band (N) was observed. This finding showed that B. ranarum, C. coronatus and P. insidiosum shared at least one common antigen. After B CFA was absorbed with Phythium rabbit antiserum, the inner precipitin line that occurred between B CFA and rabbit antisera of Phythium and Conidiobolus disappeared. However, with Basidiobolus rabbit antiserum, the result did not change. The antigens which could be demonstrated by inner (N) and outer (Y) precipitin bands were heat stable at 56.degree.C for 30 min. The titer of the antibodies specific to these antigens decreased as the lesions subsided. When B. ranarum CFA was reacted against sera from 20 apparently normal persons, 20 diabetes mellitus patients, 5 aspergillosis patients, 2 candidosis patients and 3